Office for National Statistics

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# Health Statistics Quarterly

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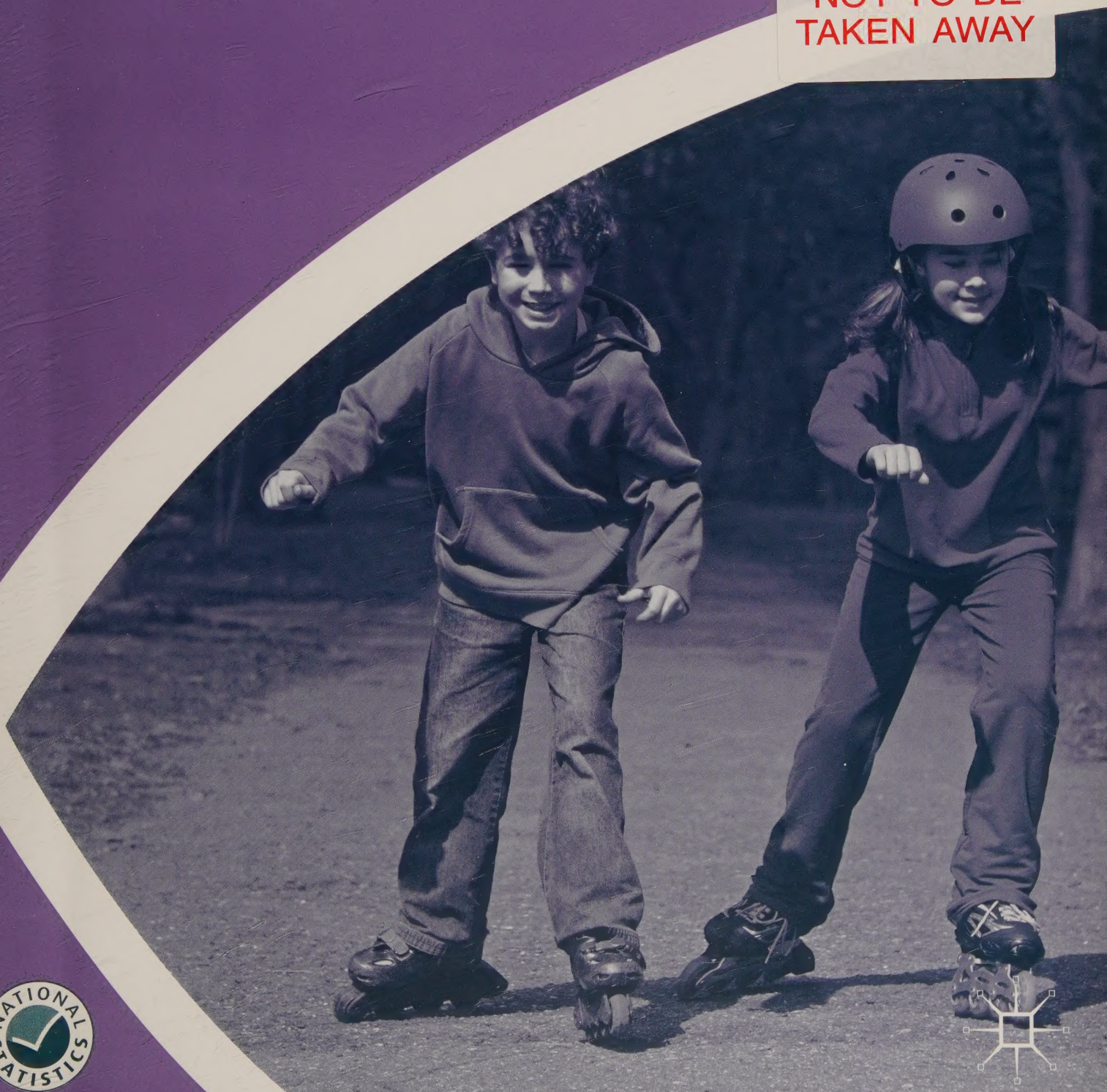

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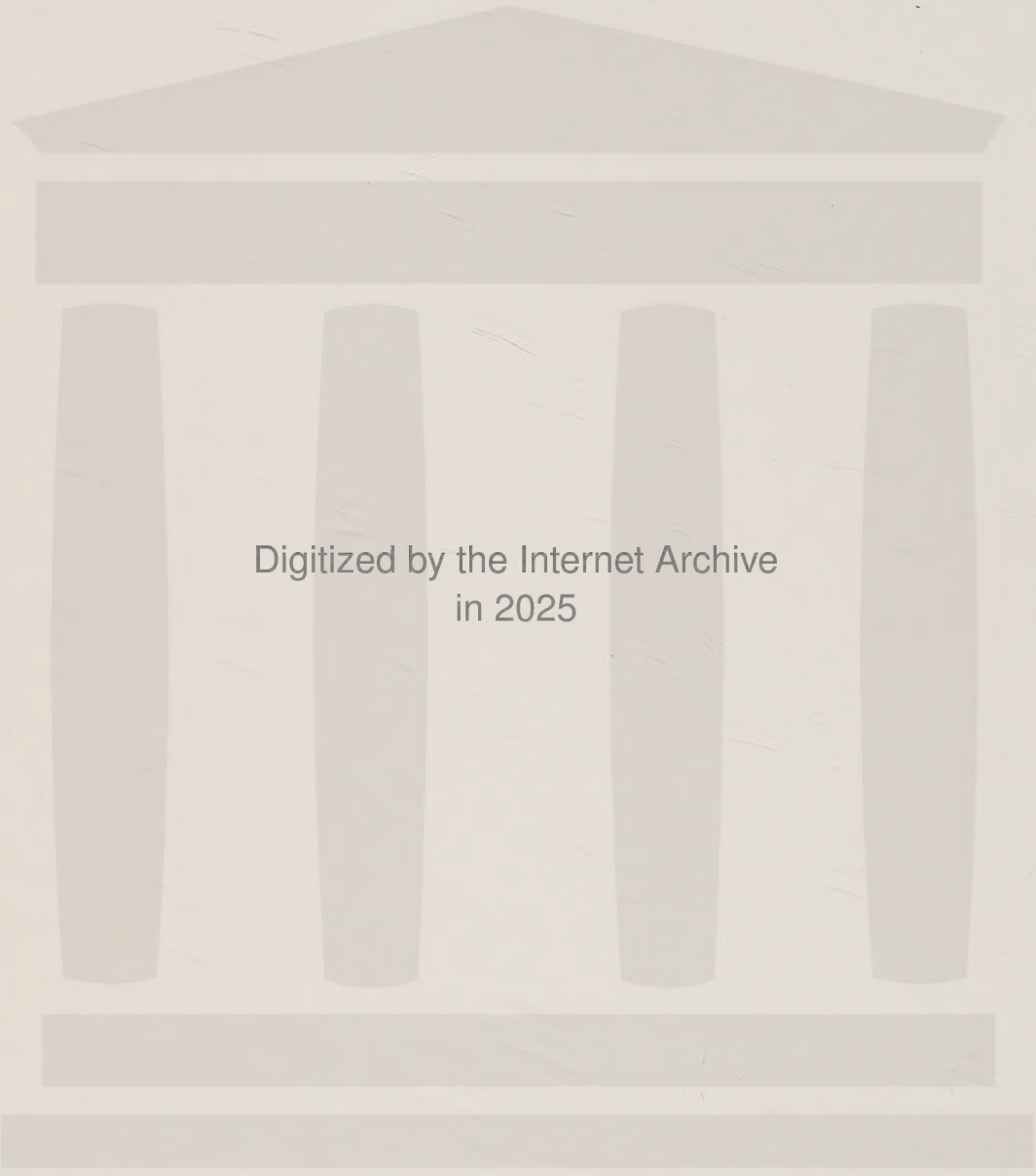

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# Health Statistics Quarterly

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|---|---|---|---|---|
| *Health Statistics Quarterly* | by 11 Sept | by 11 Dec | by 22 Mar | by 21 June |
| *Population Trends* | by 23 Oct | by 2 Feb | by 4 May | by 26 July |

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# in brief

## Children's mental health – results of a three year follow-up study

ONS published *Three years on: A survey of the emotional development and wellbeing of children and young people* on 21 October 2008. This report gives the results of a follow-up in 2007 to the study on *Mental health of children and young people in Great Britain, 2004*.

The 2007 study tracked the emotional well-being of a sample of children and young people between 2004 and 2007 and reviewed factors likely to be associated with the onset or persistence of disorders. Data were collected in 2004 on 7,977 children and young people aged five to 16 years. 7,329 children were selected to be followed up in 2007, and 5,364 interviews were achieved.

Clinical raters used a range of measures to assess if a child had a mental disorder. A child could be assessed as having more than one disorder. Four main groups were examined – emotional disorders, conduct disorders, hyperkinetic disorder and less common disorders.

Of those children and young people who had an emotional disorder in 2004, 30 per cent still had an emotional disorder in 2007. Factors associated with the persistence of emotional disorders included household tenure and mothers' mental health. For example, children who lived in rented accommodation compared to owner occupied accommodation were more likely to have a persistent emotional disorder.

Around 43 per cent of children and young people who had a conduct disorder in 2004 still had a conduct disorder three years on. Factors associated with persistence of conduct disorder include age, sex, Special Educational Needs, housing tenure, parent's educational qualifications and the number of children and young people in the household.

Of those children and young people who did not have a disorder in 2004, 3 per cent were assessed with a disorder in 2007. Factors associated with onset of emotional disorder included age, sex, presence of physical illness, family composition, socio-economic factors, and exposure to stressful life events. Onset of conduct disorder was also associated with these factors as well as with Special Educational Needs, change in family composition, and parent's educational qualifications. Children who had experienced three or more stressful life events, such as family bereavement, divorce or serious illness, were significantly more likely to develop emotional and conduct disorders.

The report is available free on the Office for National Statistics website at: www.statistics.gov.uk/cci/article.asp?id=2063

## Population estimates for mid-2007

ONS published the mid-2007 annual population estimates on 21 August 2008. These give estimates of the resident population as of 30 June 2007 for the United Kingdom and its constituent countries, Government Office Regions in England, and local areas. Figures are available at national level by single year of age and sex and sub-nationally by five year age group and sex. Full information is available on the Office for National Statistics website at: www.statistics.gov.uk/popest

Mid-2007 population estimates for Scotland were released by the General Register Office for Scotland on 24 July 2008. Information is available at: www.gro-scotland.gov.uk/statistics/population/index.html

Mid-2007 population estimates for Northern Ireland were released by the Northern Ireland Statistics and Research Agency on 31 July 2008. Information is available at: www.nisra.gov.uk/demography/default.asp3.htm

## Births and deaths 2008 – quarterly figures

Provisional quarterly figures for births, deaths and childhood mortality for the quarters ending March and June 2008 are available in this edition of *Health Statistics Quarterly*. The usual publication timetable

for these figures has now been resumed. This follows delays to the publication of births and deaths data in 2007 and early 2008 resulting from problems with the implementation of the registration online system (RON) at register offices in England and Wales during 2007.

## Contraception and sexual behaviour – new results

On 28 October 2008 ONS released results from questions about contraception and sexual behaviour, which were included on the ONS Omnibus survey at the request of the NHS Information Centre for Health and Social Care. In the survey, about 1,200 adults were questioned on topics such as contraceptive use, sexual behaviour, and knowledge of sexually transmitted infections. The full report is available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product?vlnk=6988

## Congenital anomaly statistics – change of classification

ONS is changing the way it groups different types of congenital anomalies in statistics derived from the National Congenital Anomaly System. The new classification has been developed in conjunction with the British Isles Network of Congenital Anomaly Registers (BINOCAR). It is based on the Eurocat guide to coding congenital anomalies, which is used by congenital anomaly registers across Europe.[1] As a result some anomalies (for example, pyloric stenosis, cystic fibrosis, minor skin defects) will no longer be included in ONS congenital anomaly statistics. This will have the effect of reducing the overall congenital anomaly notification rate, but there will be no impact on the rates published for specific anomalies. Further details will be included in the annual reference volume, 'Congenital Anomaly Statistics 2007: Notifications', to be published early in 2009.

## Improving ONS reports

ONS is reviewing the regular (mostly annual) reports which appear in *Health Statistics Quarterly*, to ensure that they are presented as clearly as possible and take account of the needs and views of statistics users. The review process includes writing to a wide variety of identified stakeholders to invite comments. Two reports in this edition: 'Life expectancy at birth and at age 65 by local areas in the United Kingdom, 2005–07' and 'Health expectancies in the United Kingdom, 2004–06', have already been improved as a result of this process. Comments on any aspect of HSQ or other ONS publications are always welcome.

Contact us at: hsq@ons.gsi.gov.uk

### References

1. Eurocat. Guide 1.3. Instructions for the Registration and Surveillance of Congenital Anomalies – available at: www.eurocat.ulster.ac.uk/pubdata/Guide–1.3-Cover-Page.html

## Recent Publications

*Annual Abstract of Statistics 2008 edition* (Palgrave Macmillan, £49.50, July, ISBN 978–0–230–54560–1, available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=94)

*Mortality statistics: childhood, infant and perinatal 2006 (DH3 no. 39)* (July, available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6305)

*Population Trends 133* (Palgrave Macmillan, £32.50, Autumn, ISBN 978–0–230–21756–0, available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6303)

*UK Health Statistics 2008 edition* (Palgrave Macmillan, £50, June, ISBN 978–0–230–21096–7, available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6637)

All of the above Palgrave Macmillan-published titles can be ordered on 01256 302611 or online at: www.palgrave.com/ons. All publications listed can be downloaded free of charge from the National Statistics website.

# Health indicators

England and Wales

**Figure A** Population change (mid-year to mid-year)

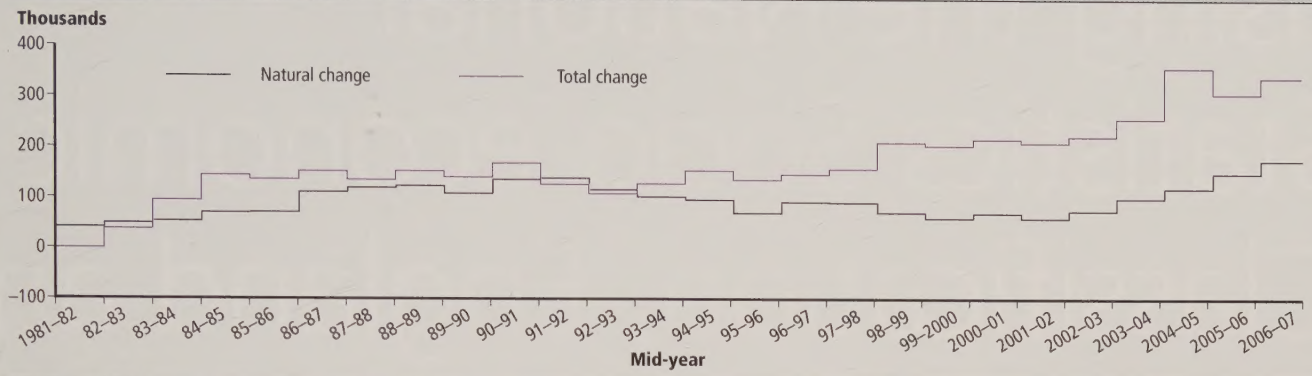



**Figure B** Age-standardised mortality rate[1]

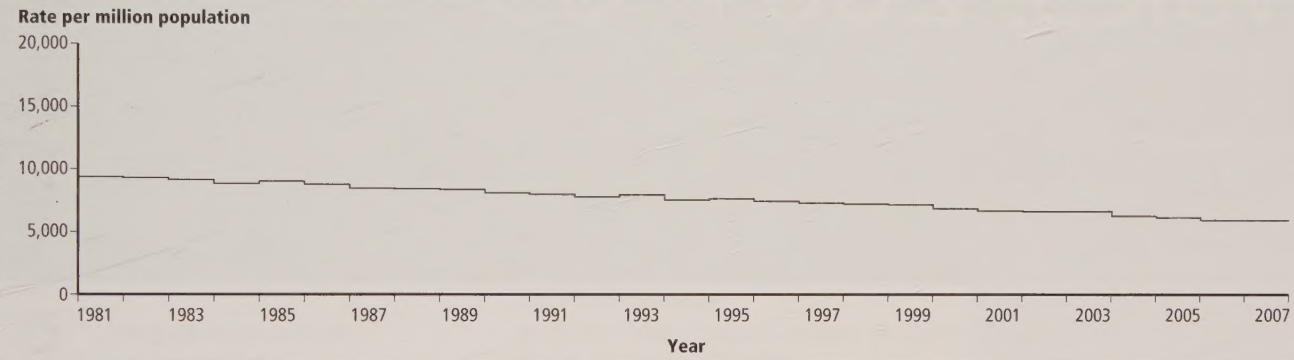



**Figure C** Infant mortality (under 1 year)

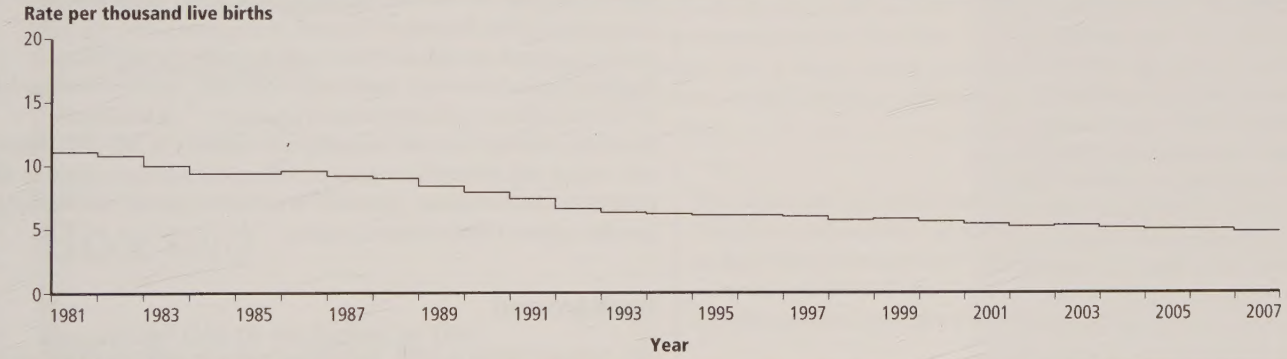
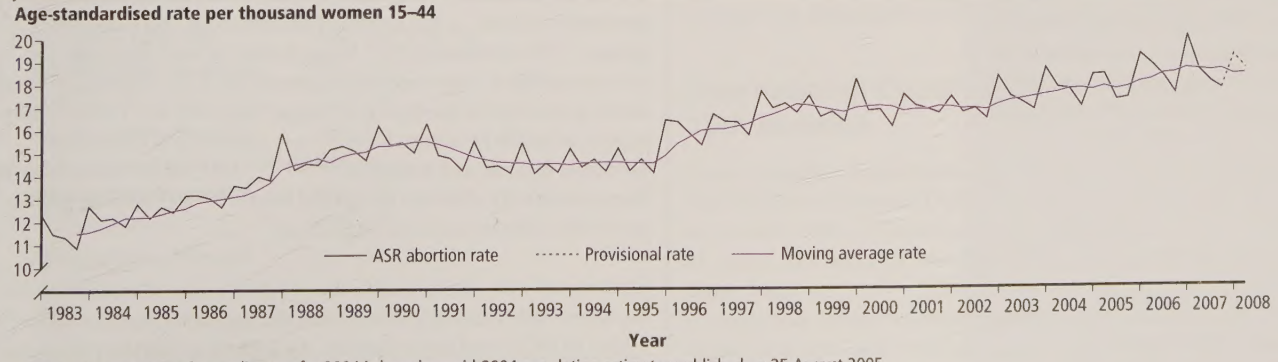



**Figure D** Age-standardised quarterly abortion rates – residents[2]




1 The age-standardised mortality rate for 2004 is based on mid-2004 population estimates published on 25 August 2005.

2 Rates for 2007 and March and June quarters 2008 are based on projected projections.

# Regional differences in male mortality inequalities using the National Statistics Socio-economic Classification, England and Wales, 2001–03

**Veronique Siegler, Ann Langford and Brian Johnson**
*Office for National Statistics*

**This article represents the first use by the Office for National Statistics of the National Statistics Socio-economic Classification (NS-SEC) to analyse regional variations in inequalities in male mortality. It is part of a series of articles on social inequalities in mortality by NS-SEC. Deaths in the years 2001–03 among men aged 25–64, from all causes and selected major cause groups, are examined in each of the Government Office Regions of England and in Wales. The results provide insights into both social gradients in mortality within regions, and regional differences in mortality for each NS-SEC class. The socio-economic differences in mortality were more marked for men in Wales, the North East and the North West. The regional differences in mortality were small for the most advantaged classes and greatest for the least advantaged classes.**

## Introduction

This article describes social inequalities in mortality among men aged 25–64 years, by selected causes of death, across Wales and the Government Office Regions of England, in the period 2001–03. It is based on methods for the analysis of male mortality by the National Statistics Socio-Economic Classification (NS-SEC) which were reported in previous articles in *Health Statistics Quarterly*.[1,2] In addition to presenting findings on social inequalities in mortality by NS-SEC within each region, this article also reports on differences between regions in the patterns of socio-economic inequality in mortality, and the contribution of specific causes of death to those patterns.

## Background

The Acheson Report in 1998[3] highlighted widening differences between the expectation of life of the most advantaged and most disadvantaged groups in society. The government strategy *Tackling Health Inequalities* aspired to 'address the inequalities that are found across different geographical areas … and between different social and economic groups'.[4] The subsequent *2007 Status Report on the Programme for Action* reported a 'very welcome improvement in life expectancy for all social groups but no narrowing of the gap' since the mid 1990s.[5] Many aspects of health have been found to vary according to both socio-economic position and geography.[6,7,8,9,10,11] Differences in mortality have been consistently observed at regional level[9,12,13] and between smaller areas with different levels of deprivation.[8]

Until recently the social classification routinely used to measure socio-economic differences in mortality was the Registrar General's Social Class (RGSC) based on occupation. An analysis of mortality by region

and RGSC for the period 1991–93 found that the socio-economic differences in mortality were greater in Wales and northern regions of England than in the southern regions.[14] There was considerably more regional variation in mortality within Social Class V (unskilled manual occupations) than within Social Class I (professionals).

RGSC was replaced by the NS-SEC in official statistics in 2001.[15] The implications of this change for mortality analysis were reported in the first article in this series.[1] The previous two articles found that the differences in male mortality between the most advantaged and least advantaged NS-SEC classes were broadly similar to those between the highest and lowest classes using RGSC. However, the pattern in the intervening classes was more complex in NS-SEC than in RGSC. This article examines whether these social patterns of mortality risk differ at a regional level from those of England and Wales as a whole.

## Methods

### The National Statistics Socio-economic Classification

The conceptual basis for the NS-SEC is the structure of employment relations operating in modern developed economies.[15] Occupations are differentiated in terms of reward mechanisms, promotion prospects, autonomy and job security. The most advantaged NS-SEC groups (higher managerial and professional occupations), typically exhibit personalised reward structures, have good opportunities for advancement, have relatively high levels of autonomy within the job, and are relatively secure. These attributes tend to be reversed for the most disadvantaged group (routine occupations). Box One shows the NS-SEC analytical class breakdowns used in this analysis, and provides examples of the occupations included in each class.

Further information on the rationale, derivation and application of the NS-SEC is available on the Office for National Statistics website.[16]

## Box one

### National Statistics Socio-economic Classification – analytic classes

| Analytic class | | Examples of occupations included |
|---|---|---|
| 1 | Higher managerial and professional occupations | Directors and chief executives of major organisations; officers in the armed forces; civil engineers; medical practitioners; physicists; geologists; IT strategy and planning professionals; legal professionals; architects |
| 2 | Lower managerial and professional occupations | Teachers in primary and secondary schools; quantity surveyors; public service administrative professionals; social workers; nurses; IT technicians |
| 3 | Intermediate occupations | NCOs and other ranks in the Armed Forces; graphic designers; medical and dental technicians; Civil Service administrative officers and local government clerical officers; counter clerks; school and company secretaries |
| 4 | Small employers and own account workers | Hairdressing and beauty salon proprietors; shopkeepers; dispensing opticians in private practice; farmers; self-employed taxi drivers |
| 5 | Lower supervisory and technical occupations | Bakers and flour confectioners; screen-printers; plumbers; electricians and motor mechanics employed by others; gardeners; rail transport operatives |
| 6 | Semi-routine occupations | Pest control officers; clothing cutters; traffic wardens; scaffolders; assemblers of vehicles; farm workers; veterinary nurses and assistants; shelf fillers |
| 7 | Routine occupations | Hairdressing employees; floral arrangers; sewing machinists; van, bus and coach drivers; labourers; hotel porters; bar staff; cleaners and domestics; road sweepers; car park attendants |

## Box two

### Causes of death included in the analysis

| Cause of death | ICD–10 codes |
|---|---|
| **All causes of death** | A00–R99, V00–Y89 |
| **All malignant neoplasms** | C00–C97 |
| Trachea, bronchus and lung | C33–C34 |
| **All circulatory diseases** | I00–I99 |
| Ischemic heart disease | I20–I25 |
| **All digestive diseases** | K00–K93 |
| All liver diseases | K70–K77 |
| **All respiratory diseases** | J00–J99 |

The information collected at death registration does not allow reliable identification of men who had never worked or were long-term unemployed, or differentiation between these categories and men who could not be allocated to an NS-SEC class for another reason.[17] Figures reported here are therefore restricted to occupied NS-SEC analytic classes only.

Death registrations collect information on the occupation and employment status of the deceased between the ages of 16 and 74. However, this analysis is restricted to men aged 25–64, since recording of occupational information outside this age range is less complete.

### International Classification of Diseases 10th Revision

Cause of death in England and Wales is coded to the International Classification of Diseases (ICD). The tenth revision (ICD–10) has been in use since 2001.[18] The mortality rates reported in this article are for all deaths, four major groups of causes and three specific causes of death. These are listed in Box Two, with the ICD–10 codes used. Causes of death were grouped to ensure sufficiently large numbers for robust statistical analysis when broken down by region and NS-SEC class.

## Government Office Regions

The Government Office Regions are the highest level statistical sub-divisions of England and are listed in Box Three. Wales is not sub-divided in this analysis. For convenience, use of the term 'region' throughout this article includes Wales.

### Box three

#### The Government Office Regions of England

North East
North West
Yorkshire and The Humber
East Midlands
West Midlands
East of England
London
South East
South West

Further information can be found in the guide to UK geography on the Office for National Statistics website.[19]

## Sources of data

Three sources of data were used to calculate the mortality rates by NS-SEC reported in this article.

- The routine collection in death registrations of age at death, sex, occupation, employment status and cause of death[20] provided information on the number of deaths occurring in each age group for each NS-SEC class in each region for the period 2001–03. Deaths were allocated to regions using postcode of usual residence
- The Census of population in the United Kingdom in 2001 provided information on age, sex, NS-SEC and region for all residents
- An earlier article in this series[1] provided population estimates by age and NS-SEC class for England and Wales as a whole, optimised for use in the analysis of mortality as described in that article.The article also provided adjustment factors to be applied to registered deaths to correct for an identified recording bias, whereby some men in the lower professional and managerial class (NS-SEC class 2) tended to be classified as intermediate (NS-SEC class 3). This recording bias occurred because the supervisory responsibilities of some men were not reported during the death registration process

To calculate mortality rates for each region by NS-SEC, these optimised population estimates were used to estimate the regional person years at risk by region. For each age group and NS-SEC combination, the percentage distribution across the regions was calculated from 2001 Census data. The resulting percentages were applied to the optimised population estimates in order to obtain an estimate of person years at risk by five-year age group and NS-SEC for each region. Deaths by age group and NS-SEC were calculated by applying the adjustment factors, referred to above, to the death registration data for the residents of each region.

## Outcome measures

To compare the mortality experience of NS-SEC analytic classes, directly age-standardised mortality rates for all men aged 25–64 were calculated, standardised to the European standard population. Age-standardised rates are a summary measure allowing populations with different age structures to be compared. In addition, 95 per cent confidence intervals were calculated for the mortality rates presented and are available on the Office for National Statistics website.[21]

## Results

Table 1 shows the population at risk examined in this analysis, by NS-SEC classification and region. An extended version of this table, giving estimated populations broken down by five-year age group, is available on the Office for National Statistics website.[21] Table 2 displays the number of deaths in 2001–03 included in the analysis, broken down by NS-SEC and region for all causes of death and for selected causes.

The age-standardised mortality rates per 100,000 men aged 25–64 by NS-SEC class and region for all causes and for each cause of death studied are shown in Table 3, and illustrated in Figure 1 for deaths from all causes only. The shading indicates whether the rate is significantly higher or lower than the corresponding England and Wales rate. The socio-economic gradients by region and cause of death are presented in Table 4, and illustrated in Figure 2. Table 5 shows the ratios of the mortality rates of the region with the highest mortality to that with the lowest within each NS-SEC class by cause of death. The shading indicates where this ratio for a class is significantly higher or lower than that for all occupied classes. Spreadsheet versions of all tables, including 95 per cent confidence intervals where applicable, can be found on the Office for National Statistics website.[21]

**Table 1** **Optimised population estimates (person years at risk) by NS-SEC classification, men aged 25–64, 2001–03**

Government Office Regions of England, Wales — Person years at risk (Thousands)

| NS-SEC analytic classes | England and Wales | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East of England | London | South East | South West | Wales |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Higher managerial, professional | 7,077 | 224 | 764 | 533 | 521 | 632 | 822 | 1,231 | 1,440 | 636 | 274 |
| 2 Lower managerial, professional | 9,212 | 369 | 1,050 | 771 | 691 | 817 | 1,047 | 1,505 | 1,633 | 892 | 437 |
| 3 Intermediate | 2,438 | 117 | 315 | 211 | 170 | 209 | 256 | 421 | 400 | 223 | 117 |
| 4 Small employers, own account workers | 5,784 | 193 | 682 | 514 | 453 | 549 | 682 | 765 | 971 | 657 | 317 |
| 5 Lower supervisory and technical | 5,660 | 323 | 779 | 597 | 514 | 622 | 585 | 540 | 807 | 549 | 343 |
| 6 Semi-routine | 4,443 | 242 | 611 | 472 | 401 | 578 | 426 | 526 | 533 | 401 | 253 |
| 7 Routine | 5,965 | 364 | 836 | 705 | 589 | 700 | 580 | 557 | 722 | 545 | 366 |

**Table 2** Cause of death by NS-SEC, men aged 25–64, 2001–03

Government Office Regions of England, Wales

Number of deaths

| NS-SEC analytic classes | England and Wales | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East of England | London | South East | South West | Wales |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **All causes of death** | | | | | | | | | | | |
| 1 Higher managerial, professional | 12,457 | 467 | 1,553 | 1,015 | 926 | 1,298 | 1,406 | 1,585 | 2,396 | 1,238 | 573 |
| 2 Lower managerial, professional | 20,334 | 968 | 2,742 | 1,754 | 1,607 | 1,976 | 2,116 | 2,688 | 3,241 | 2,057 | 1,185 |
| 3 Intermediate | 7,711 | 405 | 1,080 | 638 | 588 | 640 | 744 | 1,342 | 1,153 | 684 | 437 |
| 4 Small employers, own account workers | 20,493 | 801 | 2,779 | 1,766 | 1,517 | 2,012 | 2,125 | 2,844 | 3,142 | 2,198 | 1,309 |
| 5 Lower supervisory and technical | 20,377 | 1,432 | 3,307 | 2,160 | 1,618 | 2,291 | 1,881 | 2,076 | 2,645 | 1,675 | 1,292 |
| 6 Semi-routine | 20,442 | 1,096 | 3,434 | 2,223 | 1,707 | 2,719 | 1,737 | 2,460 | 2,382 | 1,585 | 1,099 |
| 7 Routine | 32,347 | 2,516 | 5,498 | 4,036 | 2,800 | 3,955 | 2,494 | 3,084 | 3,264 | 2,366 | 2,334 |
| **All malignant neoplasms** | | | | | | | | | | | |
| 1 Higher managerial, professional | 5,191 | 197 | 621 | 420 | 396 | 544 | 570 | 594 | 1,084 | 551 | 214 |
| 2 Lower managerial, professional | 7,796 | 366 | 962 | 676 | 599 | 730 | 835 | 945 | 1,356 | 853 | 474 |
| 3 Intermediate | 2,376 | 143 | 329 | 202 | 197 | 174 | 224 | 386 | 351 | 232 | 138 |
| 4 Small employers, own account workers | 7,591 | 285 | 1,013 | 654 | 542 | 754 | 809 | 954 | 1,231 | 861 | 488 |
| 5 Lower supervisory and technical | 7,606 | 570 | 1,242 | 810 | 598 | 851 | 751 | 676 | 998 | 626 | 484 |
| 6 Semi-routine | 6,337 | 374 | 1,052 | 743 | 538 | 811 | 526 | 703 | 745 | 503 | 342 |
| 7 Routine | 10,210 | 868 | 1,705 | 1,301 | 892 | 1,182 | 810 | 946 | 1,045 | 732 | 729 |
| **Trachea, bronchus and lung neoplasms** | | | | | | | | | | | |
| 1 Higher managerial, professional | 819 | 36 | 103 | 87 | 79 | 87 | 91 | 84 | 143 | 78 | 31 |
| 2 Lower managerial, professional | 1,458 | 73 | 195 | 138 | 115 | 140 | 140 | 187 | 251 | 136 | 83 |
| 3 Intermediate | 471 | 36 | 67 | 47 | 37 | 24 | 38 | 82 | 70 | 46 | 24 |
| 4 Small employers, own account workers | 1,958 | 75 | 297 | 183 | 132 | 176 | 174 | 270 | 327 | 200 | 124 |
| 5 Lower supervisory and technical | 1,958 | 156 | 344 | 239 | 143 | 232 | 168 | 167 | 257 | 137 | 115 |
| 6 Semi-routine | 1,790 | 103 | 333 | 219 | 149 | 233 | 145 | 192 | 190 | 125 | 101 |
| 7 Routine | 3,168 | 303 | 568 | 440 | 247 | 379 | 228 | 290 | 300 | 191 | 222 |
| **All circulatory diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 3,877 | 156 | 515 | 329 | 282 | 390 | 460 | 450 | 700 | 377 | 218 |
| 2 Lower managerial, professional | 6,492 | 319 | 1,012 | 588 | 531 | 638 | 690 | 833 | 913 | 593 | 375 |
| 3 Intermediate | 2,364 | 122 | 340 | 200 | 165 | 207 | 241 | 426 | 333 | 193 | 137 |
| 4 Small employers, own account workers | 6,911 | 302 | 964 | 601 | 553 | 636 | 721 | 951 | 1,015 | 723 | 445 |
| 5 Lower supervisory and technical | 6,786 | 487 | 1,088 | 743 | 575 | 752 | 578 | 710 | 838 | 553 | 462 |
| 6 Semi-routine | 6,788 | 376 | 1,110 | 749 | 576 | 921 | 563 | 821 | 782 | 493 | 397 |
| 7 Routine | 10,931 | 888 | 1,890 | 1,404 | 965 | 1,309 | 761 | 1,026 | 1,070 | 772 | 846 |
| **Ischaemic heart diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 2,600 | 105 | 347 | 241 | 201 | 273 | 295 | 267 | 461 | 251 | 159 |
| 2 Lower managerial, professional | 4,356 | 225 | 700 | 417 | 369 | 437 | 452 | 505 | 590 | 398 | 263 |
| 3 Intermediate | 1,555 | 94 | 229 | 130 | 115 | 137 | 149 | 248 | 221 | 141 | 91 |
| 4 Small employers, own account workers | 4,610 | 213 | 658 | 415 | 358 | 449 | 460 | 616 | 649 | 489 | 303 |
| 5 Lower supervisory and technical | 4,645 | 339 | 764 | 548 | 386 | 500 | 402 | 444 | 546 | 375 | 341 |
| 6 Semi-routine | 4,562 | 256 | 754 | 526 | 371 | 653 | 373 | 506 | 524 | 334 | 265 |
| 7 Routine | 7,593 | 613 | 1,337 | 1,010 | 690 | 914 | 505 | 668 | 706 | 541 | 609 |
| **All digestive diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 795 | 28 | 121 | 63 | 59 | 107 | 76 | 124 | 124 | 59 | 34 |
| 2 Lower managerial, professional | 1,536 | 81 | 216 | 125 | 114 | 164 | 139 | 222 | 227 | 166 | 82 |
| 3 Intermediate | 638 | 42 | 110 | 41 | 45 | 47 | 48 | 125 | 90 | 43 | 47 |
| 4 Small employers, own account workers | 1,526 | 57 | 225 | 108 | 111 | 161 | 132 | 280 | 241 | 142 | 69 |
| 5 Lower supervisory and technical | 1,521 | 116 | 294 | 156 | 104 | 184 | 97 | 172 | 204 | 103 | 91 |
| 6 Semi-routine | 1,680 | 105 | 328 | 156 | 117 | 223 | 120 | 248 | 183 | 114 | 86 |
| 7 Routine | 2,587 | 195 | 517 | 298 | 198 | 336 | 172 | 247 | 256 | 171 | 197 |
| **All liver diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 566 | 21 | 94 | 43 | 37 | 77 | 49 | 89 | 86 | 47 | 23 |
| 2 Lower managerial, professional | 1,118 | 61 | 162 | 99 | 81 | 118 | 82 | 163 | 175 | 116 | 61 |
| 3 Intermediate | 465 | 36 | 91 | 31 | 28 | 29 | 39 | 89 | 60 | 27 | 35 |
| 4 Small employers, own account workers | 1,064 | 32 | 168 | 80 | 71 | 109 | 87 | 203 | 166 | 99 | 49 |
| 5 Lower supervisory and technical | 1,065 | 75 | 209 | 101 | 72 | 131 | 71 | 129 | 135 | 70 | 72 |
| 6 Semi-routine | 1,142 | 60 | 235 | 100 | 83 | 153 | 76 | 171 | 129 | 73 | 62 |
| 7 Routine | 1,757 | 130 | 368 | 203 | 110 | 245 | 109 | 173 | 179 | 112 | 128 |
| **All respiratory diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 454 | 12 | 59 | 43 | 39 | 38 | 54 | 78 | 69 | 48 | 14 |
| 2 Lower managerial, professional | 880 | 45 | 121 | 87 | 78 | 76 | 75 | 138 | 130 | 86 | 44 |
| 3 Intermediate | 413 | 17 | 63 | 33 | 33 | 40 | 32 | 79 | 55 | 42 | 19 |
| 4 Small employers, own account workers | 1,019 | 40 | 147 | 88 | 64 | 105 | 101 | 152 | 146 | 106 | 70 |
| 5 Lower supervisory and technical | 1,124 | 92 | 205 | 117 | 72 | 130 | 93 | 131 | 142 | 90 | 52 |
| 6 Semi-routine | 1,367 | 69 | 254 | 145 | 111 | 190 | 119 | 168 | 143 | 98 | 70 |
| 7 Routine | 2,282 | 203 | 417 | 297 | 209 | 256 | 156 | 225 | 210 | 152 | 157 |

## Deaths from all causes

Within each NS-SEC class, mortality rates in the North East and the North West were significantly higher than for England and Wales as a whole, and those in the South East and the East of England were significantly lower (Table 3). The South West also had mortality rates that were significantly lower than for England and Wales as a whole within each NS-SEC class, except for higher managerial and professional occupations (NS-SEC class 1). The mortality rate for the East Midlands was significantly lower than that for England and Wales as a whole within the small employers and own account workers, lower supervisory and technical, semi-routine and routine occupations (NS-SEC classes 4 to 7). For London, on the other hand, mortality rates for all classes were higher than those for England and Wales as a whole, with the exception of the higher managerial and professional class (NS-SEC class 1).

**Table 3** **Age-standardised mortality rates[1] by cause of death and NS-SEC, men aged 25–64, 2001–03**

Government Office Regions of England, Wales — Rate per 100,000

| NS-SEC analytic classes | England and Wales | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East of England | London | South East | South West | Wales |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **All causes of death** | | | | | | | | | | | |
| 1 Higher managerial, professional | 194 | 215 | 214 | 201 | 187 | 209 | 184 | 193 | 179 | 193 | 205 |
| 2 Lower managerial, professional | 259 | 301 | 303 | 264 | 264 | 269 | 228 | 270 | 221 | 245 | 299 |
| 3 Intermediate | 286 | 340 | 326 | 270 | 299 | 275 | 250 | 331 | 248 | 252 | 351 |
| 4 Small employers, own account workers | 307 | 373 | 347 | 304 | 280 | 313 | 268 | 365 | 279 | 272 | 346 |
| 5 Lower supervisory and technical | 374 | 471 | 443 | 383 | 326 | 370 | 329 | 427 | 333 | 314 | 396 |
| 6 Semi-routine | 473 | 514 | 597 | 495 | 428 | 477 | 394 | 513 | 433 | 395 | 476 |
| 7 Routine | 513 | 699 | 644 | 555 | 447 | 535 | 391 | 540 | 412 | 398 | 635 |
| **All malignant neoplasms** | | | | | | | | | | | |
| 1 Higher managerial, professional | 82 | 92 | 86 | 84 | 80 | 88 | 76 | 76 | 82 | 86 | 77 |
| 2 Lower managerial, professional | 99 | 114 | 107 | 102 | 99 | 98 | 89 | 98 | 91 | 100 | 118 |
| 3 Intermediate | 91 | 123 | 104 | 89 | 103 | 76 | 77 | 101 | 77 | 86 | 115 |
| 4 Small employers, own account workers | 109 | 129 | 122 | 106 | 97 | 112 | 98 | 122 | 104 | 101 | 123 |
| 5 Lower supervisory and technical | 140 | 189 | 167 | 145 | 121 | 137 | 131 | 141 | 126 | 117 | 149 |
| 6 Semi-routine | 147 | 180 | 185 | 167 | 135 | 142 | 117 | 148 | 134 | 125 | 150 |
| 7 Routine | 158 | 241 | 197 | 176 | 140 | 155 | 121 | 163 | 127 | 119 | 198 |
| **Trachea, bronchus and lung neoplasms** | | | | | | | | | | | |
| 1 Higher managerial, professional | 13 | 17 | 14 | 18 | 16 | 14 | 12 | 11 | 11 | 12 | 11 |
| 2 Lower managerial, professional | 19 | 23 | 22 | 21 | 19 | 19 | 15 | 20 | 17 | 16 | 21 |
| 3 Intermediate | 19 | 33 | 22 | 21 | 20 | 10 | 13 | 22 | 16 | 17 | 20 |
| 4 Small employers, own account workers | 28 | 34 | 36 | 29 | 23 | 25 | 20 | 35 | 27 | 22 | 30 |
| 5 Lower supervisory and technical | 36 | 52 | 46 | 43 | 29 | 37 | 30 | 35 | 32 | 26 | 36 |
| 6 Semi-routine | 41 | 50 | 59 | 50 | 37 | 41 | 32 | 41 | 33 | 31 | 45 |
| 7 Routine | 48 | 84 | 65 | 59 | 38 | 49 | 33 | 50 | 36 | 31 | 60 |
| **All circulatory diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 61 | 72 | 72 | 66 | 58 | 63 | 60 | 58 | 53 | 59 | 77 |
| 2 Lower managerial, professional | 84 | 100 | 112 | 89 | 87 | 88 | 75 | 88 | 63 | 70 | 95 |
| 3 Intermediate | 90 | 105 | 106 | 87 | 86 | 92 | 82 | 109 | 73 | 71 | 112 |
| 4 Small employers, own account workers | 100 | 138 | 117 | 99 | 100 | 95 | 88 | 121 | 87 | 84 | 112 |
| 5 Lower supervisory and technical | 125 | 161 | 146 | 133 | 116 | 122 | 102 | 148 | 105 | 104 | 143 |
| 6 Semi-routine | 158 | 179 | 195 | 169 | 145 | 162 | 126 | 174 | 141 | 122 | 175 |
| 7 Routine | 172 | 247 | 221 | 192 | 153 | 175 | 116 | 179 | 132 | 126 | 230 |
| **Ischaemic heart diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 41 | 49 | 49 | 48 | 41 | 44 | 39 | 35 | 35 | 39 | 56 |
| 2 Lower managerial, professional | 56 | 71 | 77 | 63 | 61 | 60 | 49 | 54 | 41 | 47 | 67 |
| 3 Intermediate | 60 | 81 | 73 | 57 | 60 | 61 | 51 | 65 | 48 | 52 | 74 |
| 4 Small employers, own account workers | 66 | 97 | 79 | 68 | 64 | 66 | 55 | 79 | 55 | 57 | 76 |
| 5 Lower supervisory and technical | 86 | 112 | 103 | 98 | 78 | 81 | 71 | 93 | 69 | 71 | 105 |
| 6 Semi-routine | 107 | 123 | 133 | 119 | 93 | 115 | 83 | 108 | 95 | 83 | 117 |
| 7 Routine | 119 | 171 | 156 | 138 | 109 | 122 | 77 | 116 | 87 | 89 | 166 |
| **All digestive diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 12 | 12 | 16 | 12 | 12 | 17 | 10 | 15 | 9 | 9 | 12 |
| 2 Lower managerial, professional | 20 | 25 | 24 | 18 | 19 | 22 | 15 | 23 | 16 | 20 | 22 |
| 3 Intermediate | 23 | 34 | 31 | 17 | 22 | 20 | 16 | 31 | 20 | 16 | 36 |
| 4 Small employers, own account workers | 23 | 26 | 29 | 19 | 21 | 26 | 17 | 36 | 22 | 17 | 18 |
| 5 Lower supervisory and technical | 28 | 38 | 39 | 28 | 21 | 30 | 17 | 37 | 26 | 20 | 28 |
| 6 Semi-routine | 40 | 48 | 57 | 35 | 30 | 40 | 28 | 53 | 35 | 29 | 37 |
| 7 Routine | 43 | 54 | 63 | 42 | 33 | 48 | 29 | 46 | 34 | 30 | 54 |
| **All liver diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 9 | 9 | 13 | 8 | 7 | 12 | 6 | 11 | 6 | 7 | 8 |
| 2 Lower managerial, professional | 14 | 19 | 18 | 14 | 13 | 16 | 9 | 17 | 12 | 14 | 16 |
| 3 Intermediate | 17 | 29 | 25 | 13 | 14 | 12 | 13 | 21 | 13 | 10 | 26 |
| 4 Small employers, own account workers | 16 | 14 | 22 | 14 | 13 | 18 | 11 | 26 | 15 | 12 | 13 |
| 5 Lower supervisory and technical | 20 | 25 | 28 | 18 | 15 | 21 | 13 | 28 | 18 | 14 | 22 |
| 6 Semi-routine | 27 | 27 | 41 | 23 | 21 | 28 | 18 | 37 | 25 | 19 | 26 |
| 7 Routine | 30 | 36 | 45 | 29 | 18 | 36 | 19 | 33 | 25 | 20 | 36 |
| **All respiratory diseases** | | | | | | | | | | | |
| 1 Higher managerial, professional | 7 | 5 | 8 | 9 | 8 | 6 | 7 | 10 | 5 | 8 | 5 |
| 2 Lower managerial, professional | 12 | 14 | 14 | 13 | 13 | 11 | 8 | 15 | 9 | 11 | 11 |
| 3 Intermediate | 16 | 16 | 20 | 15 | 17 | 18 | 11 | 21 | 12 | 16 | 17 |
| 4 Small employers, own account workers | 15 | 18 | 18 | 15 | 11 | 15 | 13 | 19 | 12 | 12 | 17 |
| 5 Lower supervisory and technical | 21 | 31 | 27 | 21 | 14 | 21 | 16 | 27 | 18 | 17 | 16 |
| 6 Semi-routine | 31 | 33 | 44 | 32 | 28 | 33 | 26 | 35 | 25 | 24 | 31 |
| 7 Routine | 35 | 57 | 48 | 40 | 32 | 33 | 23 | 38 | 25 | 24 | 43 |

Note: 95 per cent confidence intervals are available in the web version of this table.

1 Directly age-standardised rate using the European standard population.

Indicates a mortality rate significantly higher than that of England and Wales at 5 per cent level.

Indicates a mortality rate significantly lower than that of England and Wales at 5 per cent level.

**Figure 1** Age-standardised mortality rates[1] from all causes of death by NS-SEC, men aged 25–64, 2001–03

Government Office Regions of England, Wales

1 Directly age-standardised rate using the European standard population.

In each region, mortality differed significantly between the following groups of NS-SEC classes: higher and lower managerial and professional occupations (1 and 2), self-employed and lower supervisory occupations (4 and 5) and lower supervisory and semi-routine occupations (5 and 6). The highest mortality rates occurred for routine workers (NS-SEC class 7) in most regions, and the rates were significantly higher than those in semi-routine occupations for around half of the regions studied. The North East had a significantly higher mortality rate for routine occupations than any other region (699 per 100,000). In the North West, rates for semi-routine occupations were significantly higher than any other region (597 per 100,000).

To indicate the size of the relative socio-economic differences in mortality in each region, Table 4 shows the ratio between the mortality rates of those in routine occupations and those in higher managerial and professional occupations (NS-SEC classes 7 and 1 respectively). For all-cause mortality, the largest gradients occurred in the North East (3.3), Wales (3.1), and the North West (3.0). In these regions, men in routine occupations had a mortality rate around three times higher than those in higher managerial and professional occupations. By contrast, relative differences in the South East, the East of England, the South West and the East Midlands were less than in other regions (between 2 and 2.4).

These relative differences were mainly accounted for by routine occupations, since mortality varied relatively little by region for higher managers and professionals (Table 5 and Figure 2). For higher managers and professionals there was a 20 per cent difference between the region with the lowest and highest mortality. For routine workers the corresponding figure was 80 per cent. In general, regional differences were significantly lower for the more socially advantaged classes (NS-SEC classes 1, 2 and 4).

**Table 4** **Socio-economic gradients[1] by cause of death, men aged 25–64, 2001–03**

Government Office Regions of England, Wales — Rate per 100,000

| Causes of death | England and Wales | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East of England | London | South East | South West | Wales |
|---|---|---|---|---|---|---|---|---|---|---|---|
| All causes of death | 2.6 | 3.3 | 3.0 | 2.8 | 2.4 | 2.6 | 2.1 | 2.8 | 2.3 | 2.1 | 3.1 |
| All malignant neoplasms | 1.9 | 2.6 | 2.3 | 2.1 | 1.7 | 1.8 | 1.6 | 2.1 | 1.6 | 1.4 | 2.6 |
| Trachea, bronchus and lung neoplasms | 3.7 | 5.1 | 4.5 | 3.3 | 2.4 | 3.5 | 2.7 | 4.4 | 3.3 | 2.5 | 5.3 |
| All circulatory diseases | 2.8 | 3.5 | 3.1 | 2.9 | 2.7 | 2.8 | 1.9 | 3.1 | 2.5 | 2.1 | 3.0 |
| Ischaemic heart diseases | 2.9 | 3.5 | 3.2 | 2.9 | 2.6 | 2.8 | 2.0 | 3.3 | 2.5 | 2.3 | 2.9 |
| All digestive diseases | 3.5 | 4.3 | 3.8 | 3.6 | 2.8 | 2.9 | 3.0 | 3.0 | 3.7 | 3.3 | 4.5 |
| All liver diseases | 3.5 | 3.9 | 3.5 | 3.7 | 2.6 | 3.0 | 3.1 | 3.1 | 3.8 | 2.8 | 4.4 |
| All respiratory diseases | 4.9 | 10.5 | 5.8 | 4.7 | 3.9 | 5.2 | 3.2 | 3.9 | 4.8 | 3.2 | 8.9 |

Note: 95 per cent confidence intervals are available in the web version of this table.
1 Ratio of the mortality rate of NS-SEC class 7 to the mortality rate of NS-SEC class 1.
Indicates a socio-economic gradient significantly higher than that of England and Wales at 5 per cent level.
Indicates a socio-economic gradient significantly lower than that of England and Wales at 5 per cent level.

**Table 5** **Ratio between the highest and lowest mortality rates among regions in each NS-SEC analytic class, by cause of death, men aged 25–64, 2001–03**

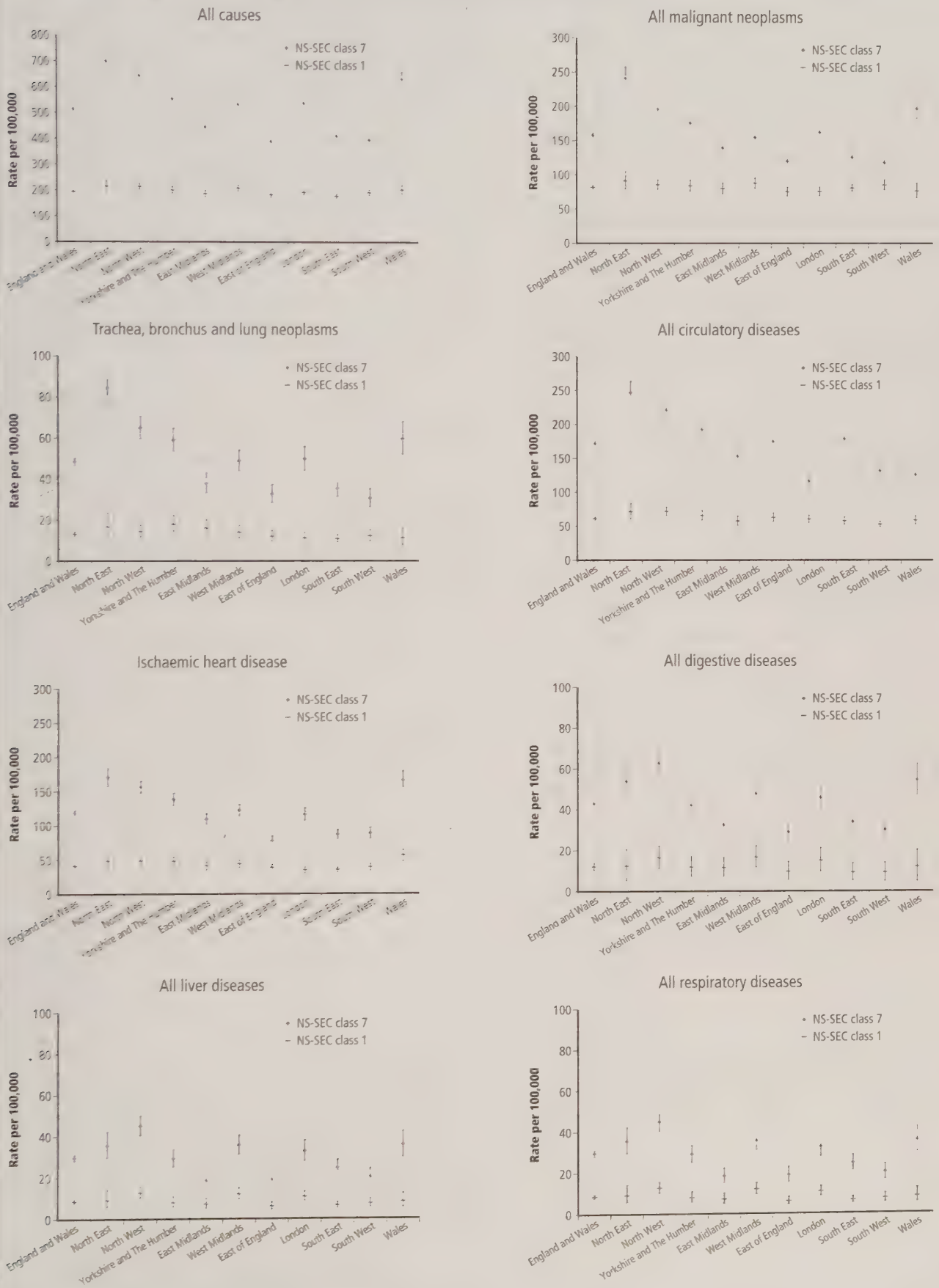
England and Wales

| Causes of death | All occupied NS-SEC classes | 1 Higher managerial, professional | 2 Lower managerial, professional | 3 Intermediate | 4 Small employers, own account workers | 5 Lower supervisory and technical | 6 Semi-routine | 7 Routine |
|---|---|---|---|---|---|---|---|---|
| All causes of death | 1.6 | 1.2 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.8 |
| All malignant neoplasms | 1.6 | 1.2 | 1.3 | 1.6 | 1.3 | 1.6 | 1.6 | 2.0 |
| Trachea, bronchus and lung neoplasms | 2.1 | 1.7 | 1.5 | 3.2 | 1.7 | 2.0 | 1.9 | 2.7 |
| All circulatory diseases | 1.8 | 1.5 | 1.8 | 1.6 | 1.6 | 1.6 | 1.6 | 2.1 |
| Ischaemic heart diseases | 1.9 | 1.6 | 1.9 | 1.7 | 1.8 | 1.6 | 1.6 | 2.2 |
| All digestive diseases | 2.1 | 1.8 | 1.6 | 2.2 | 2.1 | 2.2 | 2.0 | 2.2 |
| All liver diseases | 2.3 | 2.1 | 2.2 | 2.7 | 2.3 | 2.2 | 2.1 | 2.5 |
| All respiratory diseases | 2.1 | 2.1 | 1.7 | 1.8 | 1.8 | 2.1 | 1.9 | 2.5 |

Note: 95 per cent confidence intervals are available in the web version of this table.
Indicates a regional ratio significantly higher than that of all occupied classes at the 5 per cent level.
Indicates a regional ratio significantly lower than that of all occupied classes at the 5 per cent level.

**Figure 2** Age-standardised mortality rates[1] for NS-SEC classes 7 and 1, men aged 25–64, 2001–03

Government Office Regions of England, Wales




1 Directly age-standardised rate using the European standard population.

## Selected causes of death

In general, within each region, increasing mortality risk was associated with more disadvantaged NS-SEC classes for all the causes of death selected for analysis. However, the pattern of inequality in mortality varied by cause of death.

## All cancers (malignant neoplasms)

Mortality from all cancers was highest for routine workers (NS-SEC class 7) in the North East, with a rate of 241 deaths per 100,000 (Table 3). It was lowest for higher managerial and professional occupations (NS-SEC class 1) in London and the East of England (76 deaths per 100,000). Overall, the pattern of mortality from all cancers by class and region was generally similar to that of deaths from all causes. However, there were exceptions to this. Mortality rates for the higher managerial and professional class (NS-SEC class 1) did not differ significantly from the England and Wales figure in any region. In London, only small employers and own account workers (NS-SEC class 4) had a mortality rate significantly higher than the rate for this class in England and Wales as a whole. This contrasts with deaths from all causes, for which most NS-SEC classes had higher rates in London than for England and Wales as a whole.

Socio-economic differences in mortality from all cancers were less than those observed for the other major causes analysed in every region (Table 4). The largest relative differences between classes were in Wales and the North East (2.6 in both cases). The lowest ratio was 1.4 in the South West.

## Cancers of trachea, bronchus and lung

Cancers of the trachea, bronchus and lung represented a quarter of deaths from all cancers. Mortality was highest for routine workers (NS-SEC class 7) in the North East with a rate of 84 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in London, the South East and Wales, all with rates of 11 deaths per 100,000. The regional pattern of mortality from these causes was broadly similar to that of all cancers, with one notable exception. In Wales, only routine workers (NS-SEC class 7) had significantly higher mortality than the England and Wales rate for the class.

Relative socio-economic differences were greater for this cause than for all cancers (Table 4). For example, in Wales the relative difference was 5.3, while that for all cancers was 2.6. No region had a significantly larger socio-economic difference than England and Wales as whole. Differences were significantly smaller than for England and Wales as a whole in the South West, East Midlands and the East of England.

## Circulatory diseases

Mortality from circulatory diseases was highest for routine workers (NS-SEC class 7) in the North East with a rate of 247 deaths per 100,000 (Table 3). It was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East with a rate of 53 deaths per 100,000. The only region with a major difference in pattern from that of all-cause mortality was Wales, where mortality rates for circulatory diseases for the higher managerial and professional class and the lower supervisory and technical class (NS-SEC classes 1 and 5) were significantly higher than those of England and Wales as a whole.

Only the North East had a difference in mortality rate ratio for circulatory diseases between routine occupations (NS-SEC class 7) and higher managerial and professional occupations (NS-SEC class 1) that was significantly greater than that of England and Wales as a whole (Table 4). The corresponding ratios for the East of England, the South East and the South West were all significantly smaller than that observed for England and Wales. The greatest mortality rate ratio of 3.5 was in the North East and the lowest of 1.9 was in the East of England.

## Ischaemic heart disease

Ischaemic heart disease comprised 67 per cent of deaths from circulatory diseases. Mortality was highest for routine workers (NS-SEC class 7) in the North East with a rate of 171 deaths per 100,000 (Table 3) and lowest for higher managerial and professional occupations (NS-SEC class 1) in London and the South East with a rate of 35 deaths per 100,000. The pattern of mortality from this cause was similar to that for all circulatory diseases. The principal exceptions were Yorkshire and The Humber and London. In Yorkshire and The Humber most classes had rates that were significantly higher than England and Wales as a whole. In London only small employers and own account workers had mortality rates for ischaemic heart disease that were significantly higher than those for England and Wales as a whole, whereas for all circulatory diseases four classes had rates that were significantly higher.

Mortality rate ratios between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) followed the pattern of all circulatory diseases (Table 4).

## Digestive diseases

Mortality from digestive diseases was highest for routine workers (NS-SEC class 7) in the North West with a rate of 63 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East and the South West with a rate of 9 deaths per 100,000.

In comparison with all-cause mortality, the main differences occurred in Wales and Yorkshire and The Humber. In Wales, small employers and own account occupations (NS-SEC class 4) had a mortality rate that was significantly lower than that for England and Wales as a whole, and only intermediate and routine occupations (NS-SEC classes 3 and 7) had rates which were significantly higher than England and Wales. In Yorkshire and The Humber, small employers and own account workers also had a rate which was significantly lower than that for England and Wales.

Socio-economic differences between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) for digestive diseases were generally greater than those for all-cause mortality, but there was no significant regional variation in relative differences (Table 4). Unlike for all-cause mortality, the ratio of the mortality rate of the region with the highest rate to that with the lowest for all digestive diseases (Table 5) did not vary significantly with NS-SEC classification.

## Liver diseases

Deaths from liver diseases accounted for 70 per cent of deaths from digestive diseases. Mortality from liver diseases was highest for routine workers (NS-SEC class 7) in the North West with a rate of 45 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East and the East of England with a rate of 6 deaths per 100,000. The general pattern of mortality rates was similar to that for all digestive diseases.

Socio-economic differences between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) for liver diseases were similar to those for digestive diseases as a whole (Table 4).

## Respiratory diseases

Mortality rates from respiratory diseases were highest for routine workers (NS-SEC class 7) in the North East with a rate of 57 deaths per 100,000 (Table 3). They were lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East, North East and Wales with a rate of 5 deaths per 100,000. The pattern of mortality rates was similar to that for all-cause mortality, although many combinations of region and NS-SEC did not differ significantly from the corresponding figures for England and Wales as a whole, possibly because of the relatively small number of deaths involved.

Mortality from respiratory diseases had the greatest ratio between routine occupations (NS-SEC class 7) and higher managerial and professional occupations (NS-SEC class 1), of all causes of death selected for analysis in most regions (Table 4). For example, in Wales, mortality from respiratory diseases was about nine times higher for routine occupations than for higher managerial and professional occupations. The relative socio-economic differences in mortality in Wales and the North East were significantly higher than that for England and Wales as a whole. This was not the case in the North West for respiratory diseases.

## Discussion

The results presented here suggest that the relationship between region and NS-SEC in 2001–03 was broadly similar to that between region and RGSC in the 1991–93 study.[14] Differences in mortality by NS-SEC were found in every region, but were greatest in the North East, North West and Wales and least in the South East, South West and the East of England. Differences between regions were small for the most advantaged classes and greatest for the least advantaged. In all regions, mortality rates among routine occupations (NS-SEC class 7) in 2001–03 were typically two to three times greater than those in the higher professional and managerial classes (NS-SEC class 1). While NS-SEC was not designed as an ordinal measure, the intervening classes generally showed increasing mortality rates between these two extremes, pointing to a clear socio-economic 'gradient'.

A consequence of these patterns was that, in general, those regions with the highest mortality rates also had the greatest socio-economic variation and those with the lowest mortality rates the least variation.

London had a different pattern to the South East, with raised all-cause mortality rates in each NS-SEC class except higher managerial and professional occupations.

Previous studies relating to the 1980s[22] and the 1990s[14] also suggested that socio-economic characteristics are insufficient to explain regional differences in mortality, since within class differences persist across regions. The use of NS-SEC has not changed that observation.

The results also broadly accord with investigations into regional differences in self-reported health in 2001.[6,23] Both of these studies reported a 'north-south divide' in the level of reported ill-health. One study[6] found that Wales, the North East and the North West had the highest level of reported ill-health for men within England and Wales. However, it also found that London had the greatest inequality, as measured by the ratio of reported rates of 'not good' health for routine occupations to those for higher managerial and professional occupations, while the North East had a significantly lower gradient than for England as a whole. Thus, the association between overall mortality rate and the socio-economic gradient in mortality by region appears to be greater than the corresponding association for self reported ill-health rates.

Several possible factors could have contributed to the regional mortality differences within NS-SEC classes reported here. Firstly, NS-SEC is based on individual occupation and employment status, but cannot take into account occupation-related factors which may differ by region. For example, historically, the risk of unemployment varies by both occupation and region and may not be fully accounted for in the attribution of NS-SEC. Previous analyses have found that men who were unemployed at the time of a census had a higher probability of death in the next ten years after controlling for social class and age.[24,25] The risk was greatest in regions with the highest levels of unemployment. The persistence of this effect means that it could have an impact on those who were employed and/or had an occupied NS-SEC at death registration. The largest impact on those with an occupied NS-SEC class would be upon those in routine occupations whose employment is typically the least secure. Unemployment among economically active men was 9.2 per cent in the North East compared with 3.6 per cent in the South East according to the 2001 Census. This could be expected to have an impact on mortality beyond that accounted for by occupation and socio-economic status alone.

Secondly, the occupational composition of classes may vary by region, reflecting the geographical distribution of different industries, which could imply differing levels of occupation-specific hazards within the same class. The occupational composition of each NS-SEC group may have an effect on within-class variations in mortality. For example, an analysis of mortality in 1971 by occupation,[26] found that miners and quarrymen over the age of 35 had a 37 per cent higher mortality rate than men of the same social class, after standardising for age. The current analysis did not extend to any sub-division of the NS-SEC classes by occupation.

Thirdly, incomes and resources, such as house and car ownership, may vary by region within NS-SEC class, based on historical patterns of deprivation, local industries and labour market conditions. Non-occupational social factors have been shown to be highly correlated with health inequalities and have a separate effect on mortality from that due to occupational social class.[27]

There is also considerable literature on the relative contribution of area of residence (and in particular areas of deprivation) independent of the socio-economic characteristics of the residents.[7,8,9,28] In the simultaneous study of socio-economic and geographic effects, it is important to distinguish between the impact of the immediate environment (or local area) and that of the wider geographic region. There is greater variation in life expectancy within most regions than between them.[11] It has also been found that the most localised neighbourhood effects, as measured by the Carstairs index of ward deprivation,[29] had a powerful effect on mortality after controlling for social class, whereas district level factors, as measured by ONS area classification, were not significant. There was, however, a positive independent effect of residence in the South East region in an earlier period.[28]

Another study found that the traditional 'north-south divide' in limiting long-term illness could be partly explained by correcting for individual socio-economic characteristics.[30] The residual variation was then largely accounted for by district classifiers as represented by the ONS area typology available at that time. The authors found that a combination of intermediate geographical indicators and individual circumstances tended to explain apparent broader regional differences.

Another factor which may have an effect on within-class regional variation is selective migration. Research in Great Britain, and two studies in particular[31,32] have tended to demonstrate that selective migration has strengthened the relationship between area deprivation and health outcomes including mortality. The first study, using local authority district level data from the British Household Panel Survey, found that, at the local authority district scale, variations in standardised mortality rates could be attributed to selective migration.[31] Similarly, using ONS

Longitudinal Study data at ward level, the second study found that migrants who move from more to less deprived areas are significantly healthier than those who move from less to more deprived areas, and the largest absolute flow was by relatively healthy migrants moving from more deprived to less deprived areas.[32]

While this demonstrates the importance of selective migration for mortality rates at the level of local geography, it is not clear that it explains within-class inequalities at the regional level. For example, the first study previously referred to[31] found no evidence of a significant effect of migration on inequality at the level of region. Those of the highest socio-economic status migrate proportionately more between regions (though not within regions),[33] and it appears that migrants from more advantaged classes carry the protective effect of life-course advantage to new areas. This may contribute to the relative within-class homogeneity of mortality rates across regions among these groups. It is also possible that the healthy among those in the most disadvantaged class in the less prosperous regions are more likely to migrate across regional boundaries than those of corresponding health and class status in more prosperous regions, for example moving to seek work. The cumulative effect of these migrations within the least advantaged class may result in a residual group of less healthy non-migrants which is substantial enough to have a within-class impact at regional level. More research is needed as to whether selective migration has a significant effect on within class mortality differences at regional level.

It is also possible that regional variations in socio-economic gradients in mortality may reflect geographical patterns in the prevalence of health-related behaviours, such as smoking and drinking among the more disadvantaged NS-SEC classes. These results show that for each region some of the highest socio-economic gradients are associated with 'lifestyle' diseases such as lung cancer and liver diseases. However, the death burden for these particular diseases is outweighed by other major causes such as circulatory diseases and malignant neoplasms other than lung cancer. The pattern observed is therefore not conclusive. Respiratory diseases is the only category where a high socio-economic gradient for a specific cause of death appears to be associated with high regional differences in the mortality gradient. Further analysis is required to investigate the relationship between health behaviours, individual causes and regional differences in inequality.

Inequalities in the health of ethnic groups in England and Wales are well documented, and may have contributed to the patterns observed.[23] The proportion of the population in minority ethnic groups varies by region, and is highest in London. Studies of mortality by place of birth have shown a raised risk of ischaemic heart disease in men from India, Pakistan and Bangladesh,[34] and this could be reflected in the atypical pattern of inequality by NS-SEC found for this cause of death in London.

## Limitations of the analysis

Regional populations by age and NS-SEC were estimated using a census based apportionment of the optimised populations, along with denominator adjustments, described in the first article of this series.[1] As the adjustments were applied uniformly to all regions, there is an implicit assumption that the sources of error for which the adjustment corrected did not vary across regions.

Only more common causes of death were examined, since it was necessary for the sample to contain sufficient deaths to obtain meaningful results across regions for each cause. This placed a restriction on the causes studied. Some causes of death which have known socio-economic gradients, such as accidents and violence, were not included for this reason.

The age range chosen was limited to 25–64, as in previous articles in this series, since the recording of occupation at death registration above this age is often insufficiently detailed to code NS-SEC accurately. Consequently, these results do not reflect regional differences in the patterns of mortality in children, younger adults and those beyond working age.

Adjustments were made to reduce the effects of health selection into and out of the labour market, but it is not possible to know the extent to which these measures have eliminated selection bias. In addition, health related social mobility may have an impact on the estimation of inequalities, and this cannot be addressed in a cross-sectional study.

Selective migration between regions may also lead to bias since deaths are assigned to the region containing the usual place of residence at death, whereas the denominator is calculated using census data allocated to regions according to the addresses of the workforce in 2001.

The analysis did not take account of factors which may be related to both NS-SEC and region, such as the health hazards of specific occupations and the risk of unemployment. Similarly, ethnicity and country of birth were not taken into account and could be important in explaining some of the differences in socio-economic inequality between regions. Further research using multivariate and multilevel regression models is required to identify these factors and quantify the contributions of different variables to the patterns observed.

## Conclusions

This analysis of male deaths in 2001–03 shows that substantial socio-economic gradients in mortality existed within Wales and all regions of England. The size of these gradients varied significantly between regions. They were greatest in the North East, North West and Wales and least in the South East, South West and the East of England. Differences between regions were small for the most advantaged classes and greatest for the least advantaged.

The pattern was broadly similar for all causes of death studied, but lung cancer, liver and respiratory diseases showed higher socio-economic inequalities in all regions than other causes. Further research is needed to explain the regional variation in mortality rates within NS-SEC classes.

## Key findings

- There were socio-economic differences in mortality for men across Wales and all English regions in the period 2001–03, with higher mortality rates in the most disadvantaged NS-SEC classes
- The socio-economic gradient in mortality for most causes of death was greatest in Wales, the North East and North West and least in the South East, South West and the East of England
- London had a different pattern to the South East, with significantly raised all-cause mortality rates in most NS-SEC classes
- Regional differences in mortality were small for the most advantaged classes and greatest for the least advantaged
- Among causes of death analysed, socio-economic differences were greater in every region for lung cancer and respiratory diseases and least for all cancers combined

## References


1. White C, Glickman M, Johnson B and Corbin T (2007) 'Social inequalities in adult male mortality by the National Statistics Socio-Economic Classification, England and Wales, 2001–03', *Health Statistics Quarterly* **36**, 6–23. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
2. White C, Edgar G and Siegler V (2008) 'Social inequalities in male mortality for selected causes of death by the National Statistics Socio-economic Classification, England and Wales, 2001–03', *Health Statistics Quarterly* **38**, 19–23. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
3. Acheson D (1998) 'Independent Inquiry into Inequalities in Health', The Stationery Office: London.
4. Department of Health (2003) 'Tackling Health Inequalities: A programme for Action (2003), Department of Health: London.
5. Department of Health (2007) 'Tackling Health Inequalities: 2007 Status Report on the Programme for Action, Department of Health: London.
6. Doran T, Drever F and Whitehead M (2004) 'Is there a north-south divide in social class inequalities in health in Great Britain? Cross sectional study using data from the 2001 Census', *British Medical Journal,* **328,** 1043–45.
7. Townsend P, Phillimore P and Beattie A (1987) 'Health and deprivation. Inequality and the North', Croom Helm, London.
8. Stafford M, Bartley M, Mitchell R and Marmot M (2001) 'Characteristics of individuals and characteristics of areas: investigating their influence on health in the Whitehall II study', *Health and Place*, **7 (2)**, 117–29.
9. Drever F and Whitehead M (1995) 'Mortality in regions and local authority districts in the 1990s: exploring the relationship with deprivation', *Population Trends* **82**, 19–26.
10. Fitzpatrick J, Griffiths C, Kelleher M and McEvoy S (2001) in Griffiths C and Fitzpatrick J (eds), *Geographic Variations in Health*, Office for National Statistics Series DS no.**16** (Chapter 10), 248–325, The Stationery Office: London.
11. Wells C and Gordon E (2008) 'Geographical variations in premature mortality in England and Wales, 1981–2006', *Health Statistics Quarterly* **38**, 6–18. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
12. The Association of Public Health Observatories (2005) 'Indications of Public Health in the English Regions. Number 3: Lifestyle and its impact on health', Association of Public Health Observatories: London.
13. The Association of Public Health Observatories (2003) 'Indication of Public Health in the English Regions. Number 1: Regional summary of public health issues', Association of Public Health Observatories: London.
14. Uren Z, Fitzpatrick J, Reid A and Goldblatt P (2001) in Griffiths C and Fitzpatrick J (eds), *Geographic Variations in Health,* Office of National Statistics Series DS no. **16** (Chapter 12), 339–58, The Stationery Office: London.
15. Rose D and Pevalin D (eds) (2003), *A Researcher's Guide to the National Statistics Socio-economic Classification*, SAGE Publications.
16. Office for National Statistics, the National Statistics Socio-economic Classification on-line edition, available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=13561&Pos=1&ColRank=2&Rank=816
17. Handbook for Registration Officers*: Births and Deaths, England and Wales*, 1987, published by the authority of the Registrar General.
18. Rooney C and Smith S (2000) 'Implementation of ICD–10 for mortality data in England and Wales from January 2001', *Health Statistics Quarterly* **8**, 41–51. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
19. Office for National Statistics, Geography User Guide. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=7428&Pos=2&ColRank=1&Rank=240%20(geog)
20. Rooney C and Devis T (1997) 'The time taken to register a death', *Population Trends* **88**, 48–55.
21. Office for National Statistics, Health Inequalities in the 21st Century. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=15056
22. Britton M, Fox A, Goldblatt P *et al* (1990) 'The influence of socio-economic and environmental factors on geographic variations in mortality', in Britton M (ed), *Mortality & Geography A review in the mid-1980s*, Office of Population, Censuses and Surveys: London.
23. The Association of Public Health Observatories (2005) 'Indications of Public Health in the English Regions. Number 4: Ethnicity and health', Association of Public Health Observatories: London.
24. Moser K, Goldblatt P, Fox A and Jones D (1990) 'Unemployment and Mortality' in Goldblatt P (ed), *Longitudinal Study (Mortality and Social Organisation)*, Her Majesty's Stationery Office: London.
25. Bethune A (1997) 'Unemployment and mortality' in Drever F and Whitehead M (eds), *Health Inequalities*, Office for National Statistics Series DS no. **15** (Chapter 12), 1569–67, The Stationery Office: London.
26. Office of Population, Censuses and Surveys (1978) *Occupational mortality 1970-72: the Registrar General's decennial supplement for England and Wales* Series DS no.**1**, Her Majesty's Stationery Office: London.
27. Goldblatt P (1990) 'Mortality and alternative social classifications' in Goldblatt P (ed), *Longitudinal Study (Mortality and Social Organisation),* Her Majesty's Stationery Office: London.
28. White C, Wiggins R, Blane D *et al* (2005) 'Person, place or time? The effect of individual circumstances, area and changes over time on mortality in men, 1995–2001', *Health Statistics Quarterly* **28**, 18–33. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
29. Carstairs V and Morris R (1989) 'Deprivation, mortality and resource allocation', *Community Medicine,* **11**(4), 364–72.
30. Wiggins R, Bartley M, Gleave S *et al* (1998) 'Limiting long-term illness: A question of where you live or who you are? A multi-level analysis of the 1971–1991 Office for National Statistics Longitudinal Study', *Risk Decision and Policy* **3,** 181–98.
31. Brimblecombe N, Dorling D and Shaw M (1999) 'Mortality and migration in Britain, first results from the British Household Panel Survey', *Social Science and Medicine* **49**, 981–88.
32. Norman P, Boyle P and Rees P (2005) 'Selective migration, health and deprivation: a longitudinal analysis', *Social Science and Medicine* **60**, 2755–71.
33. Fox A J and Goldblatt P O (1982) 'Longitudinal Study 1971–1975, socio-demographic mortality differentials, Internal migration' Office of Population Censuses and Surveys Series LS no.**1** (Chapter 9), 141–70.
34. Harding S (2003) 'Mortality of migrants from the Indian subcontinent and duration of residence in England and Wales: longitudinal study', *Epidemiology* 14, 287–93.

# Geographical trends in infant mortality: England and Wales, 1970–2006

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**At national level in England and Wales, infant mortality rates fell rapidly from the early 1970s and into the 1980s. Subnational areas have also experienced a reduction in levels of infant mortality. While rates continued to fall to 2006, the rate of reduction has slowed. Although the Government Office Regions Yorkshire and The Humber, the North West and the West Midlands and the Office for National Statistics local authority types Cities and Services and London Cosmopolitan have experienced relatively large absolute reductions in infant mortality, their rates remained high compared with the national average. Within all regions and local authority types, a strong relationship was found between ward level deprivation and infant mortality rates. Nevertheless, levels of infant mortality declined over time even in the most deprived areas with a narrowing of absolute differences in rates between areas. Areas in which the level of deprivation eased have experienced greater than average reductions in levels of infant mortality.**

## Introduction

The level of infant mortality can be seen as a major indicator of the health of a nation[1,2] with the focus on infant mortality rates (deaths at ages under one year, per 1,000 live births) remaining high on academic[3] and public health and policy agendas[4,5] within the UK and throughout the world.[6] Throughout the 20th century, infant mortality rates in England and Wales steadily declined, largely due to 'improved living conditions, diet and sanitation, birth control, advances in medical science and the availability of healthcare'.[7] The reduction in infant mortality has been cited as the single greatest factor contributing to increased life expectancy over the past 100 years.[8,9]

A range of social and biological factors are associated with high infant mortality.[10,11] These factors include low birthweight, multiple births, marital status, age of mother, country of birth of mother and father's social class.[2,12,13,14] Social class differences in infant mortality rates are wider in the postneonatal period (deaths between 28 days and one year) than the neonatal period (deaths under 28 days).[15] Despite reductions in infant mortality over time, health inequalities in infant mortality remain between different social groups.[4,16,17]

During the 20th century geographical variations in infant mortality have been observed[18,19] with reductions in rates unevenly distributed,[20] although to some extent this is explained by distributions of people by social class. From 1900 up to the 1960s infant mortality rates in Wales were higher than rates for England,[21] though by the 1990s Wales had lower infant mortality than England. At regional level within England, a north-south divide has existed with higher rates tending to be found in the north.[22]

Since the 19th century, the strong tendency has been for infant mortality rates in urban and mining areas to be higher than those in more rural locations, largely due to adverse living conditions and housing density.[20,23,24,25,26] During 1991–97, high infant mortality rates were concentrated in the major urban areas including London, Birmingham, Sheffield and Manchester.[15,22] To draw out geographical patterns, and to avoid small number problems, areas can be grouped together using their socio-demographic characteristics. During the 1990s the local authorities classified[27] as East Inner London, Ports and Industry and in particular the Manufacturing Centres had the highest infant mortality rates with lower rates for the Most Prosperous, Growth Areas and Rural Amenity locations.[22] Consistently over time, the most deprived areas within the countries of the UK have had the highest infant mortality rates and the least deprived areas the lowest rates.[22,28,29,30,31] Moreover, low birthweight, a risk factor associated with infant mortality,[15] is itself associated with area deprivation.[14,32] Despite ongoing reductions in infant mortality rates in England and Wales, reports have continued to highlight subnational variations in infant mortality.[33,34,35]

Recent advances in the development of a time-series of demographic data[36,37,38] enabled trends in infant mortality to be investigated. Given the previous findings referred to above, the work reported here aimed to investigate whether the reductions in infant mortality rates, observed at national level between 1970 and 2006, were uniform geographically by specific geographies and by area types. This was achieved by:

- the compilation of a database of counts of live births and deaths to infants aged under one year with all data georeferenced to a common small area geography – in this case the Census Area Statistics wards (CAS) as used for the dissemination of the 2001 Census

- the aggregation of these small area statistics into both larger geographies and into different types of areas. After the calculation of rates, this enabled the investigation of regional trends in infant mortality and whether trends varied across different types of area, with a particular focus on the relationship between infant mortality and area deprivation

This paper first reports on the compilation of the database of the relevant vital statistics and defines the geographies and methods used in the analysis. The results section which follows describes national and regional trends in infant mortality between 1970 and 2006 and explores trends by area types.

## Data and methods

### Compiling a database on a consistent geography at ward level from 1970 onwards

Annual data on live births and deaths of infants aged under one year, collected through the national system of birth and death registration and processed by the Office for National Statistics (ONS), were used for England and Wales from 1970 to 2006. While these were available annually at national level, it was not possible to obtain the relevant subnational vital statistics for 1973 to 1978, and data were therefore analysed only for 1970–72 and 1979 onwards.

The last few decades of the 20th century saw widespread changes in the administrative geographies of England and Wales, particularly at small area level. Taking the census years as examples, in 1971 there were over 16,000 electoral wards nesting into the London, County and Municipal Boroughs and the Urban and Rural Districts which formed the then system of local government in England and Wales. This was subsequently reformed in 1974. In 1981 and 1991 there were 9,289 and 9,527 wards respectively, which nested into 403 local authority districts and the Registrar General's Standard Regions. Following further local government reorganisation during the 1990s, by 2001 there were 376 local authorities (a mix of London Boroughs, Metropolitan Districts, County Districts and the new Unitary Authorities) which nested within the nine Government Office Regions (GORs) in England, and Wales. For the dissemination of the 2001 Census, 8,850 CAS wards were used, which nested into local authorities and thus GORs, and Wales.

The complexity of geographical changes presents a challenge to the creation of a data time-series so that trends can be analysed.[36,37,38] To identify change over time, the original births and deaths data were adjusted to a common geography. For the results to have currency, the 2001 CAS wards were used. Geographical consistency was achieved in two ways:

- data for 1970–72 and 1979–89 were apportioned between the geography in which the data exist (the 'source' geography) to the 2001 Census wards (the 'target' geography). This apportionment was computed using a proxy for population distribution – the counts of postcodes (weighted by the number of addresses at each) which fall in the intersections of the source and target geographies. This technique is well-established[39,40] and is reliable enough that a similar approach is now adopted by the ONS Small Area Population Estimates team to provide mid-year estimates for non-standard areas[41]

- data for 1990–2006 were directly allocated by ONS to the 2001 wards using the postcode recorded on the birth or death registration certificate

### Geographies used in the analysis

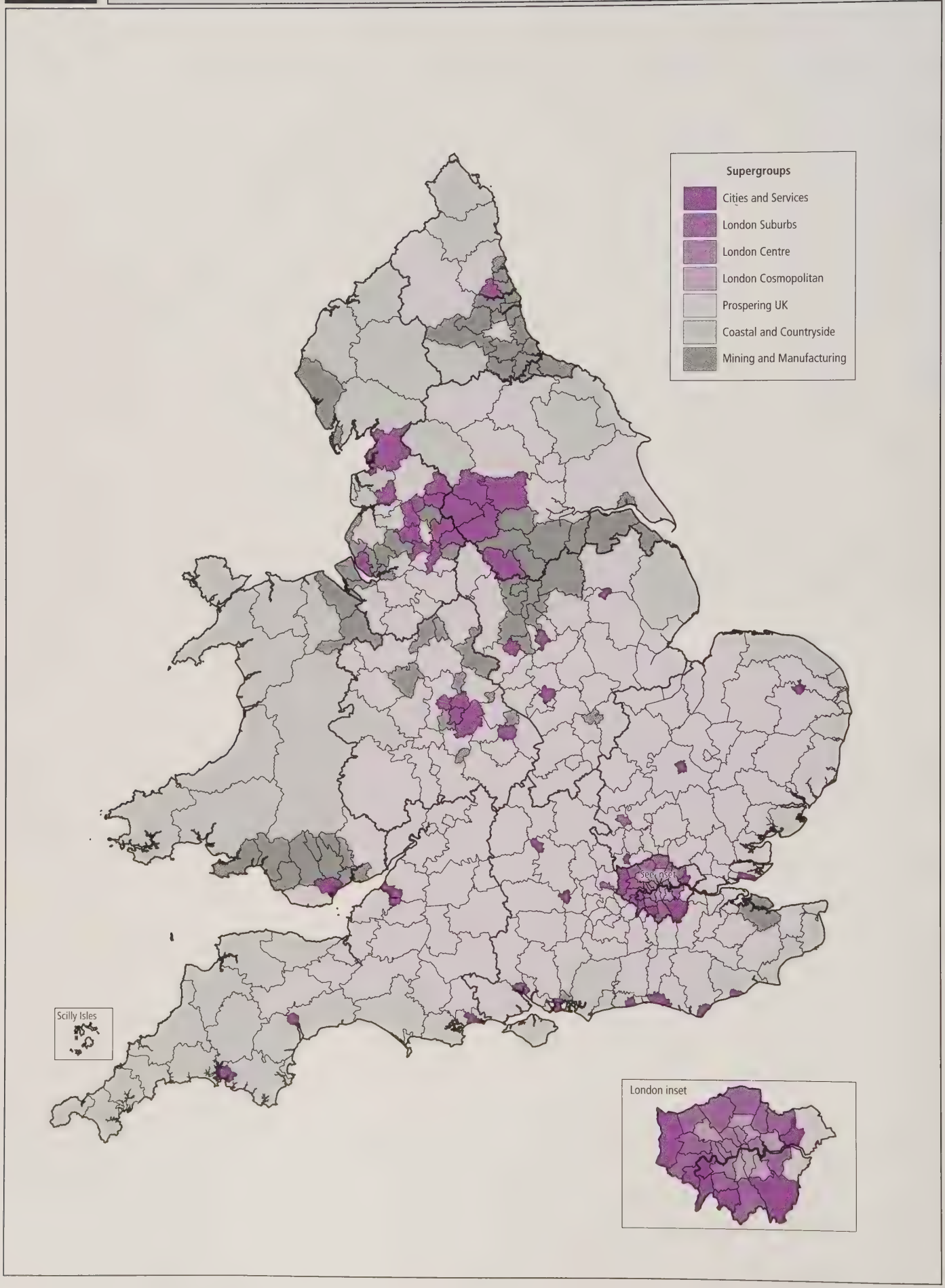
With the time series of births and deaths harmonised to the 2001 wards, the data could be aggregated into higher geographies. For this study, these comprised the Government Office Regions and the National Statistics Area Classification of local authorities.[42,43] Through these aggregations it was possible to investigate whether changes in infant mortality rates observed at national level occurred evenly for the GORs and across seven different types of areas – the Supergroups known as Cities and Services, London Suburbs, London Centre, London Cosmopolitan, Prospering UK, Coastal and Countryside, and Mining and Manufacturing. Map 1 illustrates the distribution of these area types. The area classification is based on 41 variables from the key statistics tables of the 2001 Census. In this 'geodemographic' scheme areas are grouped together based on similarities in the socio-economic characteristics of their residents, even though like areas may be geographically distant.

### Measuring area deprivation over time

In addition to these local authority area types, the relationship between infant mortality and deprivation over time was also investigated. The Index of Multiple Deprivation (IMD) is the Government's current preferred indicator of deprivation in England. Similar, but not directly comparable, IMDs have been developed for the other constituent countries of the UK. The relative complexity of the IMD, lack of consistency between the index for England compared with the scheme in Wales and a lack of equivalent data over time means that it is not feasible to construct historical datasets.

The Townsend Index of Material Deprivation,[44] one of the most widely-used indices,[15,45,46,47,48] was used here since consistent input variables are available for successive censuses. Townsend scores are based on four input variables: unemployed residents as a percentage of all economically active residents; households without access to a car as a percentage of all households; households that are not in owner occupied accommodation as a percentage of all households; and overcrowded households (more than one person per room) as a percentage of all households.

**Map 1** National Statistics 2001 Area Classification for Local Authorities, England and Wales



Raw data were available in computerised format at ward level from the 1971, 1981, 1991 and 2001 Censuses so it was possible to calculate Townsend scores for these time points. As with the births and deaths data, the input variables were apportioned from the census geographies for which they were originally disseminated to be consistent with the 2001 Census wards, with deprivation scores then calculated for that geography. To calculate the scores, the unemployment and overcrowding variables were log transformed to produce less skewed distributions and all four variables were standardised as z-scores and summed, with each variable given an equal weight, to give a final deprivation score. The average score for England and Wales is zero, while higher positive scores indicate greater levels of material deprivation and more negative scores indicate less deprived areas. It is common in health studies to summarise results across deprivation quintiles, calculated with each quintile comprising either 20 per cent of the number of areas or 20 per cent of the population distribution. Here deprivation quintiles have been calculated, each with 20 per cent of live births. Quintile 1 contains the least deprived wards, with the most deprived wards in quintile 5. Map 2 illustrates the 2001 distribution of the deprivation quintiles across England and Wales, revealing a strong urban-rural gradient of deprivation.

For the Townsend indicator variables, national levels of non-home ownership, no access to a car and household overcrowding all steadily reduced over time. Contrary to these trends, overall unemployment rose between 1971 and 1981, was still relatively high in 1991, but reduced by 2001. Variations at more local level exist though. As a check on their applicability over time, the Townsend scores were compared with another indicator of deprivation, the Breadline Britain measure.[36] This measures relative poverty based on a lack of the perceived necessities of life, using information from poverty surveys. Incorporating more indicators of deprivation than the Townsend index, the Breadline Britain measure has been applied every 10 years since 1970 to produce geographical estimates of the number of 'poor' households. When incorporated into a common geography, a correlation between Townsend scores and the percentage of households which are 'Breadline poor' showed a very strong relationship (significant correlations of 0.88 in 1971 and 0.98 in 1981, 1991 and 2001).

It has been demonstrated that when the deprivation levels of areas change, there is an associated change in the general health of the people who live in those areas.[49] To investigate this for infant mortality, rates were calculated for those wards which remained in the same deprivation quintile or became more or less deprived over time. Thus, wards which were allocated into the least and most deprived quintiles at each of the 1971, 1981, 1991 and 2001 Censuses were identified, with the remainder classified as changing quintile during the time period. A further classification flagged those wards becoming more deprived or less deprived, and also those experiencing a bigger change by becoming more, or less, deprived by two or more quintiles.

In the results section which follows, this paper reports on a time-series of infant mortality rates for England and Wales, for the regions of England, and Wales, and for local authority area types for the periods 1970–72 and 1979–2001. These rates were calculated using rolling averages of annual births and deaths data. The averages were based on data for three-years, except at the start and end of the two time periods where two years were used (that is 1970–71, 1970–72, 1972–73, 1979–80, 1979–81, 1980–82…2004–06, 2005–06). National infant mortality rates for England and Wales were based on an aggregation of data which had been allocated to the English GORs and Wales. These figures therefore exclude non-residents who are normally included in the routine publication of national infant mortality rates by ONS.

The relationship between infant mortality and deprivation is then investigated by presenting cross-sections of infant mortality rates by deprivation quintile for four periods around the census years from 1971 to 2001, and also for more recent data. These were calculated as an average of the three years surrounding each census and relate therefore to 1970–72, 1980–82, 1990–92 and 2000–02. Infant mortality rates for 2004–06 were calculated in relation to 2001 deprivation. At each of these time points, to show the relative difference in infant mortality between the most and least deprived areas, rate ratios are used (calculated as the rate in quintile 5 divided by the rate in quintile 1), along with their associated confidence intervals.[50]

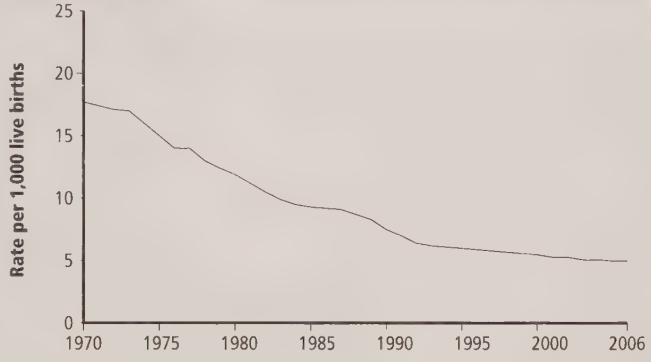
## Results

### National level

For England and Wales, the infant mortality rate fell rapidly from 17.7 infant deaths per 1,000 live births in 1970 to a rate of 11.9 at the start of the 1980s (Figure 1). Rates continued to fall through the 1980s though not so rapidly in the mid-decade. In 1990 the national rate was 7.5. A more modest, but steady, decline continued through the last decade of the 20th century, to a rate of 5.5 in 2000. This decline continued, with the rate for 2006 being at an all time low of 5.0 infant deaths per 1,000 live births.

**Figure 1** Infant mortality rate,[1] 1970–2006

England and Wales[2]




1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

### Government Office Regions, and Wales

There was considerable regional variation between infant mortality rates in 1970, with the lowest at 14.7 per 1,000 live births in the South East and the highest, at 20.3, in the North West. All regions experienced a large reduction in infant mortality rates, through a rapid decline up to the early 1990s, after which the reductions were more modest (Table 1 and Figure 2). Between 1970 and 2006, absolute differences in infant mortality rates between regions narrowed considerably. Despite having the smallest absolute reduction, the South East remained the GOR with the lowest rate (4.0). The West Midlands, with a rate of 6.4, replaced the North West as the region with the highest infant mortality.

While the year-by-year fluctuations create rather 'busy' looking graphs (Figure 3), plotting each region's rate relative to the England and Wales rate each year shows that the relative reductions in infant mortality over the study period were not evenly distributed, neither geographically nor over time. Overall, there was more variation in relative ratios in the 1990s and 2000s than in the early 1980s. Three regions, the East of England, South East and South West, had infant mortality rates which were lower than the national average for England and Wales across the whole period 1970–2006. From 1979 to the late 1980s their rates were more similar to the national average than they had been in 1970–72. From the late 1980s onwards however, their rates were particularly low compared to the England and Wales rate. Yorkshire and The Humber, the North West, and the West Midlands had infant mortality rates which were consistently higher than the national average. Despite the absolute reductions in infant mortality in these regions, from the late 1980s onwards their rates were increasingly high compared to the rate for England and Wales. The

**Map 2** Ward-level deprivation, 2001: Townsend scores in quintiles with 20 per cent of live births, England and Wales

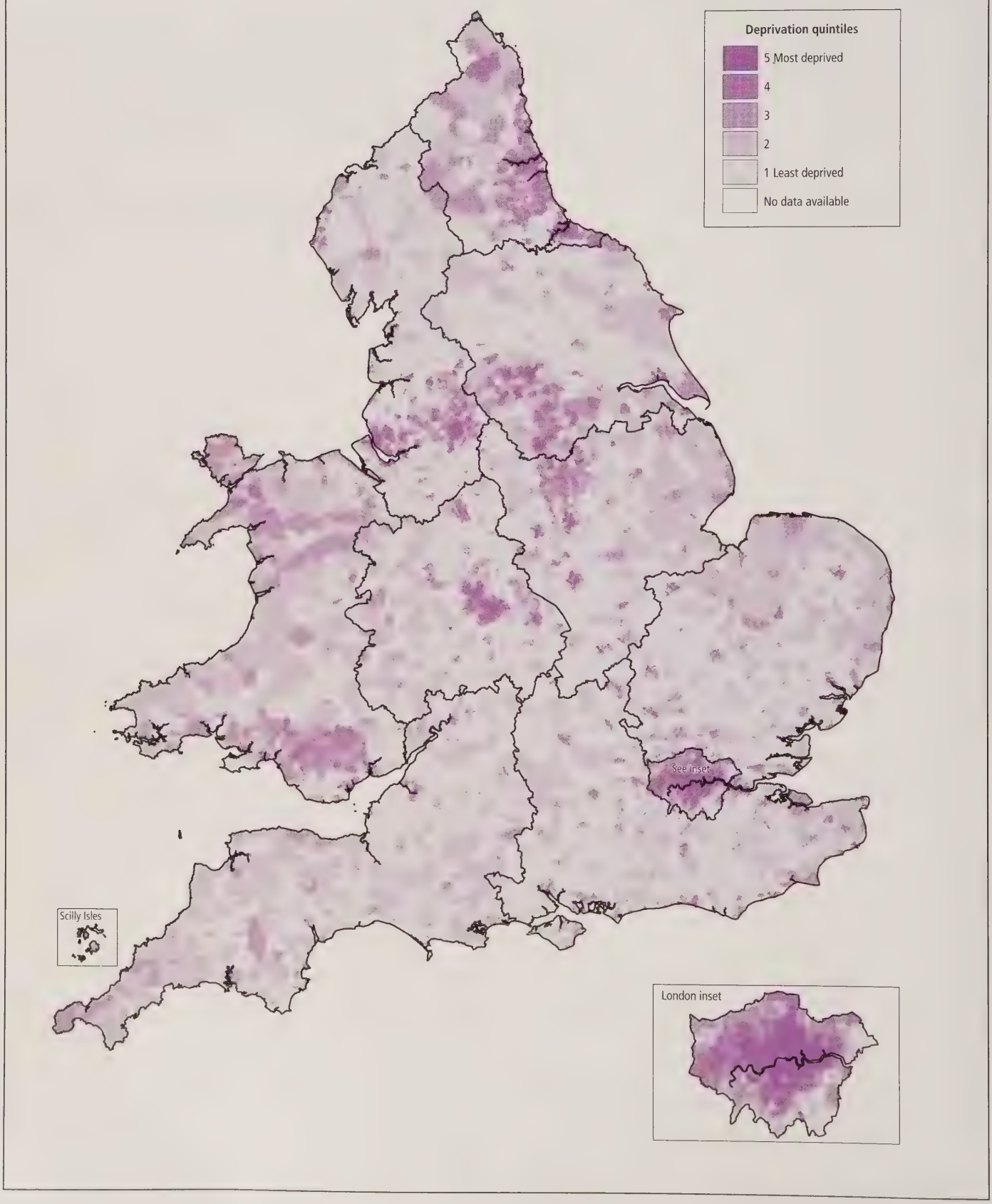


**Table 1** **Infant mortality rates:[1] Government Office Regions of England, and Wales,[2] 1970–72, 1979–2006**

Government Office Regions of England, Wales — Rate per 1,000 live births

| | England and Wales | England | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East of England | London | South East | South West | Wales |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1970 | 17.7 | 17.5 | 18.8 | 20.3 | 20.2 | 17.5 | 18.1 | 15.0 | 17.7 | 14.7 | 15.6 | 18.2 |
| 1971 | 17.4 | 17.4 | 19.1 | 19.8 | 19.7 | 17.5 | 18.1 | 14.6 | 17.6 | 14.4 | 15.6 | 17.4 |
| 1972 | 17.1 | 17.1 | 19.3 | 19.2 | 19.3 | 17.5 | 17.9 | 14.3 | 17.5 | 14.1 | 15.3 | 16.8 |
| 1973–78 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 1979 | 12.4 | 12.5 | 12.9 | 13.2 | 13.3 | 11.3 | 13.7 | 11.5 | 12.7 | 11.8 | 11.7 | 10.6 |
| 1980 | 11.9 | 11.9 | 12.1 | 12.5 | 12.9 | 11.1 | 13.0 | 10.8 | 12.0 | 11.2 | 11.2 | 11.1 |
| 1981 | 11.2 | 11.2 | 10.9 | 12.0 | 12.1 | 10.6 | 12.4 | 10.3 | 11.2 | 10.6 | 10.6 | 10.9 |
| 1982 | 10.5 | 10.4 | 10.1 | 11.1 | 11.3 | 10.6 | 11.5 | 9.3 | 10.1 | 9.7 | 10.0 | 10.8 |
| 1983 | 9.9 | 10.0 | 9.7 | 10.4 | 10.7 | 10.0 | 11.3 | 8.9 | 9.7 | 9.2 | 9.5 | 9.5 |
| 1984 | 9.5 | 9.5 | 9.7 | 9.9 | 10.5 | 9.8 | 10.6 | 8.4 | 9.2 | 8.7 | 9.1 | 9.1 |
| 1985 | 9.3 | 9.4 | 9.4 | 9.8 | 10.4 | 9.6 | 10.4 | 8.3 | 9.1 | 8.4 | 8.9 | 8.6 |
| 1986 | 9.2 | 9.2 | 9.0 | 9.8 | 10.2 | 9.7 | 9.8 | 8.3 | 9.2 | 8.5 | 8.7 | 8.8 |
| 1987 | 9.1 | 9.1 | 8.7 | 9.5 | 9.9 | 9.7 | 9.9 | 8.0 | 9.2 | 8.5 | 8.8 | 8.3 |
| 1988 | 8.7 | 8.7 | 8.4 | 8.9 | 9.3 | 9.1 | 9.8 | 7.6 | 9.1 | 8.2 | 8.2 | 7.8 |
| 1989 | 8.3 | 8.3 | 8.3 | 8.5 | 9.0 | 8.6 | 9.9 | 6.8 | 8.6 | 7.7 | 7.7 | 7.0 |
| 1990 | 7.5 | 7.6 | 8.1 | 7.9 | 8.4 | 7.6 | 9.3 | 6.0 | 7.8 | 6.7 | 6.6 | 6.6 |
| 1991 | 7.0 | 7.0 | 7.6 | 7.3 | 7.8 | 7.2 | 8.8 | 5.3 | 7.2 | 6.1 | 6.1 | 6.1 |
| 1992 | 6.4 | 6.5 | 7.3 | 6.7 | 7.4 | 6.8 | 7.7 | 5.2 | 6.8 | 5.3 | 5.8 | 5.8 |
| 1993 | 6.2 | 6.3 | 6.7 | 6.5 | 7.2 | 6.6 | 7.3 | 5.2 | 6.5 | 5.1 | 5.5 | 5.7 |
| 1994 | 6.1 | 6.2 | 6.6 | 6.5 | 7.2 | 6.3 | 6.9 | 5.2 | 6.3 | 4.9 | 5.4 | 5.9 |
| 1995 | 6.0 | 6.1 | 6.4 | 6.4 | 6.8 | 6.0 | 7.0 | 5.2 | 6.2 | 5.2 | 5.5 | 6.1 |
| 1996 | 5.9 | 5.9 | 6.2 | 6.4 | 6.7 | 5.8 | 6.9 | 5.1 | 6.1 | 5.0 | 5.4 | 5.7 |
| 1997 | 5.8 | 5.8 | 5.7 | 6.3 | 6.6 | 5.8 | 6.9 | 5.0 | 6.0 | 4.9 | 5.2 | 5.7 |
| 1998 | 5.7 | 5.7 | 5.5 | 6.4 | 6.8 | 5.6 | 6.7 | 4.7 | 5.9 | 4.6 | 4.8 | 5.5 |
| 1999 | 5.6 | 5.6 | 5.6 | 6.3 | 6.6 | 5.6 | 6.7 | 4.6 | 5.8 | 4.6 | 4.8 | 5.7 |
| 2000 | 5.5 | 5.5 | 5.5 | 6.1 | 6.3 | 5.5 | 6.5 | 4.5 | 5.8 | 4.4 | 4.8 | 5.4 |
| 2001 | 5.3 | 5.4 | 5.2 | 5.7 | 6.0 | 5.5 | 6.5 | 4.4 | 5.7 | 4.4 | 4.7 | 5.0 |
| 2002 | 5.3 | 5.3 | 4.8 | 5.7 | 5.8 | 5.7 | 6.7 | 4.5 | 5.6 | 4.4 | 4.4 | 4.6 |
| 2003 | 5.1 | 5.2 | 4.7 | 5.6 | 5.9 | 5.5 | 6.8 | 4.3 | 5.4 | 4.2 | 4.3 | 4.6 |
| 2004 | 5.1 | 5.1 | 4.7 | 5.6 | 5.8 | 5.2 | 6.8 | 4.2 | 5.3 | 4.0 | 4.4 | 4.4 |
| 2005 | 5.0 | 5.0 | 4.9 | 5.5 | 5.8 | 5.0 | 6.4 | 4.1 | 5.0 | 4.0 | 4.4 | 4.4 |
| 2006 | 5.0 | 5.0 | 5.0 | 5.5 | 5.8 | 5.1 | 6.4 | 4.1 | 5.0 | 4.0 | 4.3 | 4.1 |

1 Rates are based on rolling averages of annual data for live births and infant deaths (see Methods section).
2 Excludes non-residents of England and Wales.
.. Not available

West Midlands, which had a similar rate to that of England and Wales in 1970–72, tended to have the highest rate from 1979 onwards, with relative ratios to the national average increasing over time. The infant mortality rate in Wales was higher than that in England in 1970, but after that was mostly consistently lower. By 2006 the rate in Wales was only 4.1 infant deaths per 1,000 live births, compared with 5.0 in England.

## Local authority types

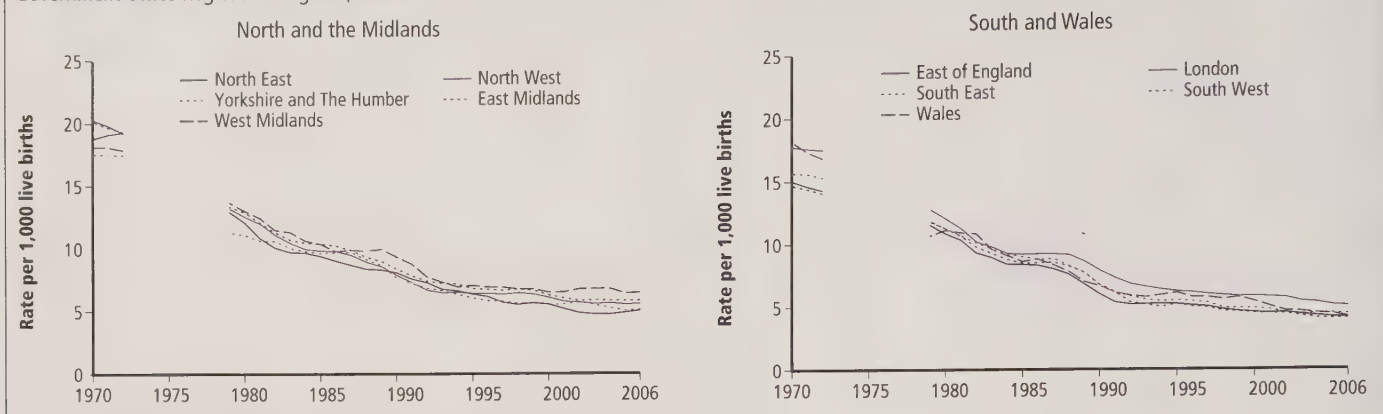
Infant mortality rates for all the National Statistics Area Classification Supergroups also showed a rapid decline from 1970 (lowest rate in Coastal and Countryside at 15.0; highest rate in London Cosmopolitan at 20.9) to the early 1990s (Table 2 and Figure 4). The falls in infant mortality rates were then more modest so that in 2001 the lowest rate again occurred in areas classified as Coastal and Countryside (4.2), with the highest rate again in London Cosmopolitan (7.6). In 2006, however, the lowest rate was in Prospering UK (4.0) with Cities and Services experiencing the highest rate (5.9).

Plotting the rates for each Supergroup relative to the national level in each year (Figure 5) shows a clearer difference in infant mortality between area types. Compared to the early 1970s, in the early 1980s there was a reduction in the amount of relative difference from national rates. From the early 1990s to the turn of the century, the difference in rates between Supergroups increased markedly, though by 2006 this had reduced somewhat. Throughout the study period (1970–2006), the strong tendencies were that Cities and Services and London Cosmopolitan had high infant mortality rates relative to the national level while Coastal and Countryside and Prospering UK had relatively low rates. The London Centre area had the most volatile relative ratios. This could be a 'small number' problem since this area had around 400 infant deaths per year in the early 1970s, which reduced to less than 100 per year in recent years. The counts of live births used as the denominators were also relatively small.

*Ward level deprivation*

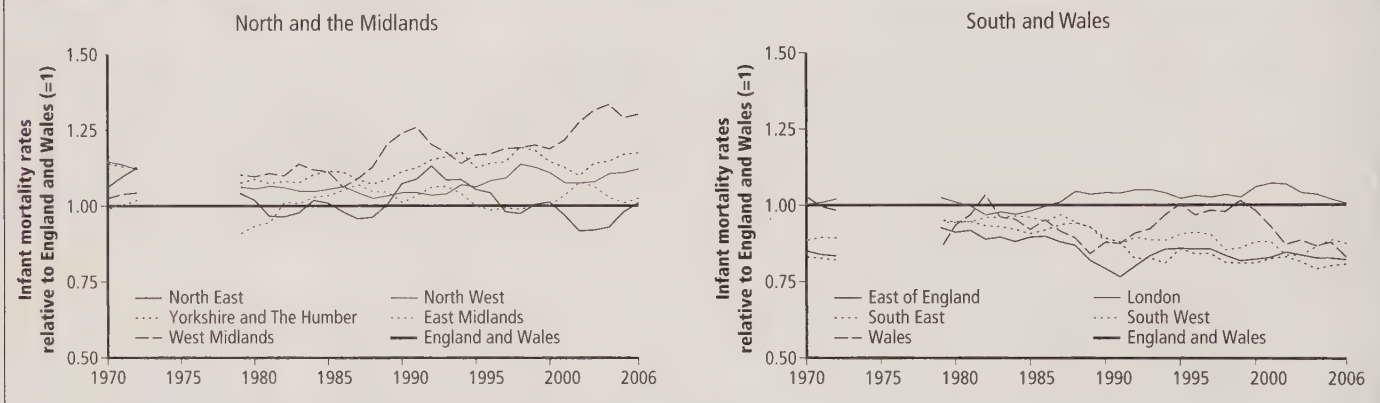
Infant mortality rates around each census year from 1971 to 2001 (Table 3 and Figure 6), showed a strong, positive relationship with deprivation, with significant differences between quintiles (except between quintiles 1 and 2 in 1981 and 1991 when the confidence intervals overlap). The 2004–06 rates, centred around 2005, also showed the same relationship. Such is the reduction over time in levels of infant mortality that the rates in all deprivation quintiles in 1981 were below even the least deprived

**Figure 2** Infant mortality rates,[1] Government Office Regions of England, and Wales,[2] 1970–72, 1979–2006




1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

**Figure 3** Infant mortality rates[1] for Government Office Regions, and Wales, relative to England and Wales,[2] 1970–72, 1979–2006




1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

areas in 1971, a pattern which was repeated in 1991. This was no longer the case by 2001 when reductions in rates had slowed down, but all 2001 quintiles had significantly lower rates than their equivalents in 1991. By 2005, the only quintile with rates which were significantly lower than its counterpart in 2001, was quintile 5, containing the most deprived areas.

Inequalities between differently deprived areas are highlighted more clearly in Figure 7 which illustrates the ratio of infant mortality rates in the most to least deprived areas. Rate ratios above one occur when rates in quintile 5 are higher than those in quintile 1. Over the study period, although the ratio of rates in the most and least deprived areas narrowed between 1971 and 1981 from 1.40 to 1.26, it widened to 1.59 in 1991 and 2.19 in 2001. By 2005, the relative inequality reduced to 1.87. The 95 per cent confidence intervals, illustrated in Figure 7, show that the ratios at each time point were statistically significantly different from each other.

Of the wards which remained in the same deprivation quintile in all four censuses, 15 per cent were in quintile 1 (least deprived) and five per cent were in quintile 5 (most deprived). For the wards that remained in quintile 1 the infant mortality rate in 1971 was 14.0 and in 2005 was 3.5. The wards which remained in quintile 5 had significantly higher rates compared to the wards that remained in quintile 1 in both 1971 (20.8) and 2005 (6.6), but the absolute reduction was larger (10.5 reduction in quintile 1; 14.2 reduction in quintile 5). The rates for wards remaining in the most and least deprived quintiles were only marginally different to the rates calculated for all wards in quintiles 1 and 5 in 1971 and 2005. This suggests that current area deprivation is influential on mortality outcomes rather than there being a cumulative advantage or disadvantage.

In wards which became less deprived, infant mortality rates decreased from 17.5 in 1971 to 4.5 in 2005, a reduction of 13.0. Wards which became relatively more deprived experienced less of a decrease since rates in these locations were 17.1 in 1971 and 5.2 in 2005, a reduction of 11.9. A slightly bigger disparity exists for those wards which became less deprived by two or more quintiles over time since areas with particularly reduced deprivation had a rate of 4.0 in 2005 compared with 17.3 in 1971, a decrease in the infant mortality rate of 13.3. While the rate in wards which became much more deprived by two or more quintiles was not as high in 1971 (16.8) as in other areas, the rate in 2006 (5.4) was relatively high, compared with wards which became less deprived. Wards which became relatively less deprived experienced a reduction in infant mortality rates greater than that for national rates in England and Wales.

**Table 2**

**National Statistics 2001 Area Classification for local authorities: infant mortality rates[1] for Supergroups, England and Wales,[2] 1970–72, 1979–2006**

Supergroups — Rate per 1,000 live births

| | Cities and Services | London Suburbs | London Centre | London Cosmopolitan | Prospering UK | Coastal and Countryside | Mining and Manufacturing |
|---|---|---|---|---|---|---|---|
| 1970 | 19.6 | 16.5 | 18.9 | 20.9 | 15.4 | 15.0 | 19.5 |
| 1971 | 19.6 | 16.1 | 19.2 | 20.6 | 15.1 | 14.4 | 19.1 |
| 1972 | 19.4 | 15.7 | 19.0 | 20.6 | 14.9 | 13.8 | 18.6 |
| 1973–78 | .. | .. | .. | .. | .. | .. | .. |
| 1979 | 13.8 | 13.3 | 12.7 | 13.6 | 11.6 | 9.5 | 12.7 |
| 1980 | 13.0 | 12.2 | 11.9 | 12.9 | 11.0 | 9.9 | 12.3 |
| 1981 | 12.4 | 11.0 | 11.6 | 12.2 | 10.5 | 9.7 | 11.5 |
| 1982 | 11.5 | 9.9 | 11.0 | 10.9 | 9.6 | 10.2 | 10.7 |
| 1983 | 11.0 | 9.4 | 10.5 | 10.7 | 9.1 | 9.8 | 10.0 |
| 1984 | 10.6 | 9.2 | 9.3 | 10.5 | 8.6 | 9.4 | 9.6 |
| 1985 | 10.6 | 9.1 | 8.4 | 10.6 | 8.4 | 9.0 | 9.3 |
| 1986 | 10.4 | 9.2 | 8.8 | 10.7 | 8.4 | 8.8 | 9.1 |
| 1987 | 10.1 | 9.2 | 8.9 | 10.6 | 8.3 | 8.7 | 9.0 |
| 1988 | 9.5 | 9.0 | 9.4 | 10.2 | 8.0 | 8.1 | 8.7 |
| 1989 | 9.2 | 8.5 | 8.9 | 9.3 | 7.5 | 7.7 | 8.5 |
| 1990 | 8.5 | 7.6 | 8.3 | 8.7 | 6.6 | 6.8 | 7.9 |
| 1991 | 8.0 | 7.0 | 7.5 | 8.3 | 6.0 | 6.3 | 7.2 |
| 1992 | 7.5 | 6.3 | 6.9 | 8.2 | 5.5 | 5.6 | 6.7 |
| 1993 | 7.2 | 5.9 | 6.7 | 8.2 | 5.4 | 5.6 | 6.4 |
| 1994 | 7.0 | 6.0 | 6.1 | 8.0 | 5.2 | 5.6 | 6.5 |
| 1995 | 6.8 | 6.1 | 5.6 | 7.9 | 5.2 | 5.7 | 6.4 |
| 1996 | 6.8 | 6.1 | 5.4 | 7.6 | 5.0 | 5.4 | 6.3 |
| 1997 | 6.8 | 5.9 | 5.3 | 7.7 | 4.9 | 5.2 | 6.1 |
| 1998 | 6.7 | 5.9 | 5.8 | 7.3 | 4.7 | 4.9 | 5.9 |
| 1999 | 6.7 | 5.9 | 5.3 | 7.3 | 4.6 | 4.6 | 6.0 |
| 2000 | 6.7 | 5.8 | 5.4 | 7.4 | 4.4 | 4.4 | 5.7 |
| 2001 | 6.8 | 5.6 | 4.8 | 7.6 | 4.4 | 4.2 | 5.2 |
| 2002 | 6.7 | 5.4 | 4.9 | 7.5 | 4.3 | 4.4 | 5.0 |
| 2003 | 6.4 | 5.2 | 4.6 | 6.9 | 4.3 | 4.3 | 5.1 |
| 2004 | 6.2 | 5.5 | 4.6 | 6.1 | 4.2 | 4.4 | 5.1 |
| 2005 | 6.0 | 5.5 | 4.3 | 5.8 | 4.0 | 4.6 | 5.2 |
| 2006 | 5.9 | 5.6 | 4.2 | 5.7 | 4.0 | 4.7 | 5.2 |

1 Rates are based on rolling averages of annual data for live births and infant deaths (see Methods section).
2 Excludes non-residents of England and Wales.
.. Not available

**Table 3**

**Infant mortality rates: Townsend deprivation quintiles, England and Wales, 1970–72 to 2004–06**

Rate per 1,000 live births

| Deprivation quintile | 1970–72 | 1980–82 | 1990–92 | 2000–02 | 2004–06 |
|---|---|---|---|---|---|
| Q1: Least deprived | 14.5 | 10.0 | 5.7 | 3.5 | 3.5 |
| Q2 | 15.8 | 10.5 | 6.0 | 4.4 | 4.1 |
| Q3 | 17.2 | 11.1 | 6.6 | 5.0 | 4.9 |
| Q4 | 19.3 | 11.9 | 7.5 | 6.1 | 5.7 |
| Q5: Most deprived | 20.4 | 12.6 | 9.0 | 7.7 | 6.5 |
| England and Wales | 17.4 | 11.2 | 7.0 | 5.3 | 5.0 |

Wards which became relatively more deprived had lower infant mortality rates than the national average in 1971, but higher rates by 2005.

### Ward level deprivation within Government Office Regions

It was noted above that levels of infant mortality vary between GORs and also by ward level of deprivation. To investigate whether the relationship with ward deprivation is evident within regions, results are presented here for East of England and for the West Midlands – regions which generally have relatively low and high infant mortality rates respectively. Note that the deprivation quintiles are relative to the national distribution so the number of live births in each quintile within GORs may not be equal.

Figure 8 shows that in both East of England and the West Midlands there was evidence of increasing infant mortality with increasing deprivation, as noted above for all wards in England and Wales. The differences in rates between adjacent deprivation quintiles in each year and GOR were not necessarily significant (given small numbers), but the overall pattern is clear and the differences between quintiles 1 and 5 were significant. In both the East of England and the West Midlands, the infant mortality rates progressively decreased across the deprivation gradient from one census time point to the next. Reflecting the generally advantageous infant mortality position in East of England, levels of infant mortality were consistently lower compared with the West Midlands. Nevertheless, even in East of England inequalities between the most and least deprived areas were evident. For example, in 2001, the ratio between rates in the most and least deprived wards was 2.73, a slightly greater disparity than in West Midlands where the rate ratio was significantly lower (2.50), even though the rates in the East of England were lower. Similar situations exist within all the other GORs, with levels of infant mortality increasing with deprivation but reducing in each deprivation quintile overall over time.

### Ward level deprivation within local authority types

Similarly, to identify whether the relationship between infant mortality and deprivation existed within local authority area types, rates were calculated for the Prospering UK and Cities and Services Supergroups – area types which were shown above to experience relatively low and high infant mortality respectively. The deprivation quintiles are relative to the national distribution so the number of live births in each quintile within Supergroups may not be equal.

Figure 9 shows that the relationship between infant mortality and deprivation observed for all wards also exists within area type. Over time, rates declined in all deprivation quintiles by area type with rates in Prospering UK consistently below those in City and Services, reflecting the overall differences between the area types. Despite the classification label of Prospering UK, local authorities of this type still contain relatively deprived areas and inequalities exist between the most and least deprived areas. In Prospering UK areas, rate ratios increased significantly from the situation in the early 1970s when rates in quintile 5 were 1.34 times those in quintile 1, to 2.11 around 2001, but reduced a little by 2004–06 to 1.99. A similar pattern exists for wards in Cities and Services areas in which the quintile 5 to quintile 1 inequalities increased significantly from 1.28 around 1971 to 2.29 at the start of the 21st century but levelled off to 2.26 by 2004–06. In other area types, the relationship with deprivation described here is also found with similar reductions over time.

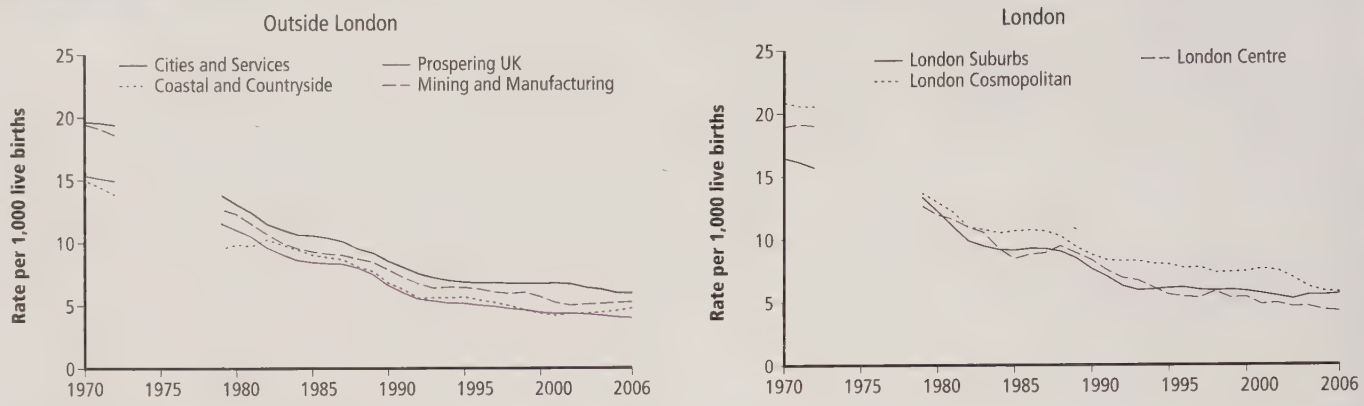
## Discussion

Examining trends in population health for subnational geographies can be severely hampered when data are released over time in different formats, especially when the areas for which data are disseminated change. To investigate trends in infant mortality, an annual time-series of vital statistics data from the early 1970s to 2006 was assembled, harmonised to the ward geography used for the 2001 Census. Unfortunately, the subnational time-series was incomplete between 1973 and 1978.

At national level in England and Wales, infant mortality rates fell rapidly from the early 1970s and into the 1980s. While rates then continued to fall, the reduction slowed. Nevertheless, in 2006 the national rate of infant mortality was at an all time low of 5.0 deaths to infants aged under one year per 1,000 live births. Broadly, this pattern was also seen when the ward level data were aggregated into Government Office Regions, local

**Figure 4** Infant mortality rates[1] by Supergroups, 1970–72, 1979–2006

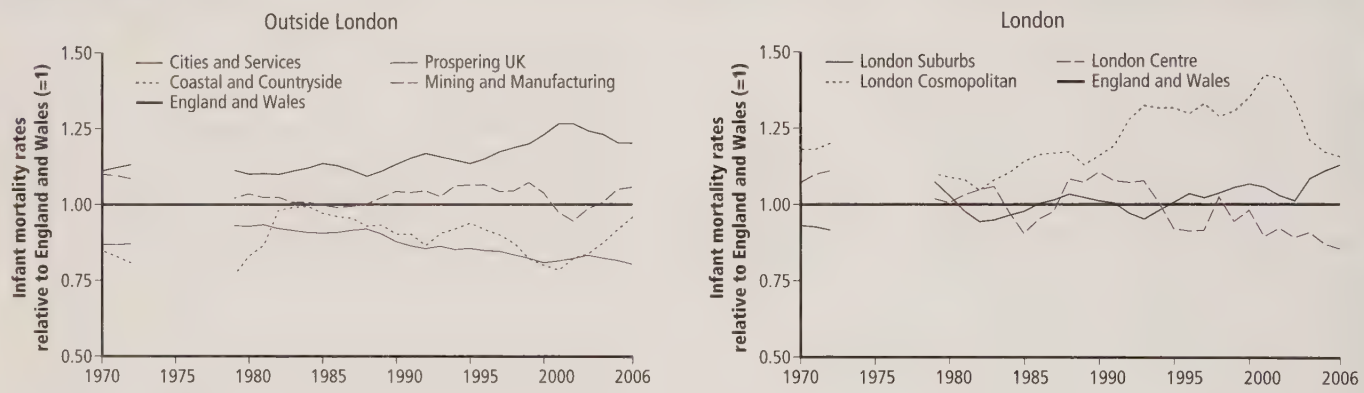
England and Wales[2]




1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

**Figure 5** Infant mortality rates[1] for Supergroups, relative to England and Wales,[2] 1970–72, 1979–2006

England and Wales[2]




1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

**Figure 6** Infant mortality rates by deprivation quintile, 1970–72 to 2004–06

England and Wales

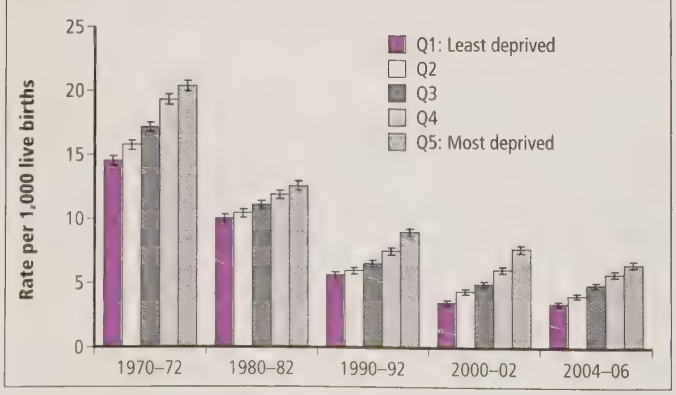



**Figure 7** Rate ratios of infant mortality rates: most to least deprived areas, England and Wales, 1970–72 to 2004–06

England and Wales

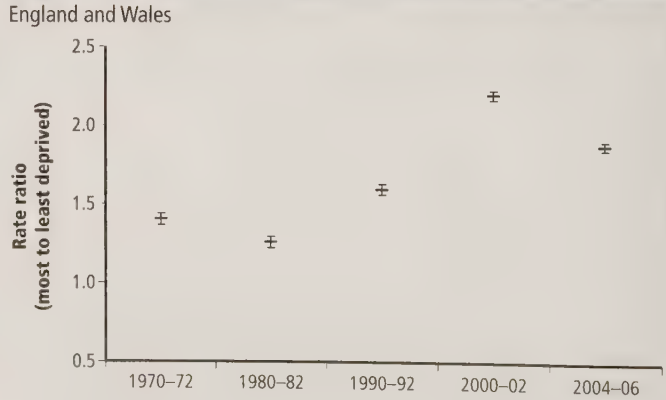


**Figure 8** Infant mortality rates by deprivation quintile and Government Office Region, 1970–72 to 2004–06

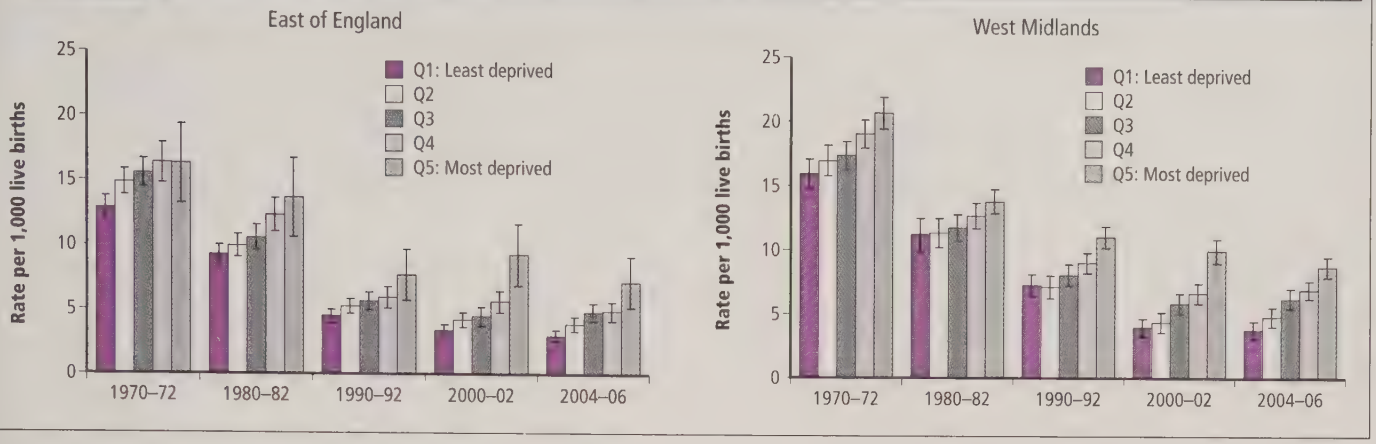
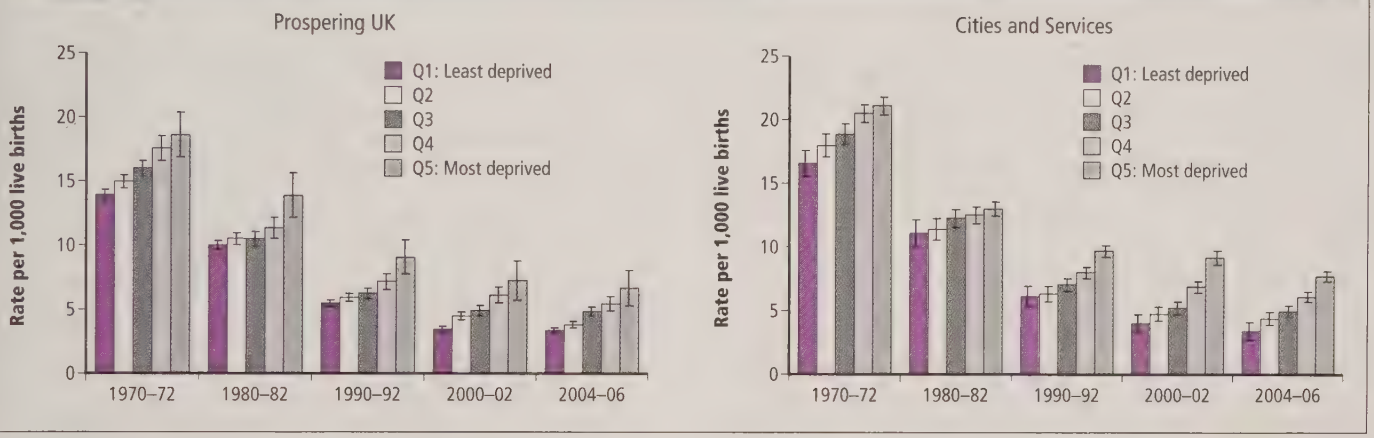



**Figure 9** Infant mortality rates by deprivation quintile and Supergroup, 1970–72 to 2004–06




authority area types and quintiles of deprivation. However, while all areas experienced a decrease in levels of infant mortality, different locations and area types did not see the same pace of reduction. For example, relative to the national level, infant mortality in Yorkshire and The Humber, the North West and the West Midlands or the area types Cities and Services and London Cosmopolitan remained high. Southern regions and non-urban area types had relatively low infant mortality rates. Disparities between both regions and area types reduced a little between 2001 and more recent data for 2004–06, but there was more difference in infant mortality by local authority type than by region. Although the geographies and area types are defined differently, the regional north-south differentials and urban-rural area type variations are consistent with infant mortality rates previously reported for the 1970s, 1980s,[51] and 1990s.[22]

Between the early 1970s and 2006 levels of infant mortality reduced for all quintiles of deprivation over time but the relationship between infant mortality and deprivation was essentially consistent with more deprived areas having relatively high rates compared to the least deprived areas. This relationship holds for deprivation quintiles within regions and across local authority area types. What is particularly telling is that deprived wards had relatively poor infant mortality rates even within larger areas with apparently advantageous rates. Similarly, the least deprived wards within regions and area types with relatively poor infant mortality experienced lower rates. Generally, the infant mortality/deprivation gradient existed across all areas, but at a level tempered up or down in relation to the larger area geography. These infant mortality-deprivation relationships are in line with previous studies[28,29,30,31] especially that this relationship persists within regions.[22] At national level, recent infant mortality rates are at a similar level to the Netherlands (4.7 per 1,000 live births), Canada (4.8), New Zealand (5.0) and Italy (5.0). At 3.5 per 1,000 live births, the infant mortality rate in the least deprived areas of England and Wales (wards in quintile 1 using the Townsend index) are lower than national rates in France (4.2) and Germany (4.3) but not as low as Norway (3.3), Japan (3.2) and Iceland (2.9). The most deprived areas in England and Wales (wards in quintile 5) have rates (6.5) similar to Croatia (6.4) and Malta (6.5).[52] Note that these international comparisons must be interpreted with care due to potential differences in data quality, definitions and time periods.

Researchers and policy makers have tended to focus on the social and biological factors which are associated with high infant mortality.[10,12,13,14,15,53,54] The research reported here has shown that small area deprivation is more strongly related to levels of infant mortality than larger area geography and that a reduction in disparities between the most and least deprived areas between the early 1970s and 1980s was paralleled by rapid reductions in infant mortality. When ward level inequalities increased during the 1990s, the reductions in rates for regions and local authority types slowed down and the relative differences increased. From 2001 to 2004–06, when inequalities in infant mortality by deprivation narrowed again, there was a similar reduction in rate differences between larger geographic regions. It should be acknowledged that the most recent rates have been related to deprivation calculated for 2001 and that any changes in the geography of deprivation in the intervening period are not accounted for.

Higher rates of infant mortality in more deprived communities may be the result of many factors.[22] For example, more deprived areas tend to have much higher rates of teenage pregnancies, babies born with a low birthweight and people of low social class (and therefore on low income); all of which are associated with higher risk of infant mortality. For the general population, during the latter part of the 20th century, health has become more strongly aligned with deprivation than in the mid-century, due in part to both health-selective migration and to long-term immobility in deprived places.[55,56]

On both conceptual and technical levels, the choice of which deprivation index and indicator variables to use has been subject to wide debate.[47,57,58] However, it is worth noting that the various commonly-used deprivation measures tend to correlate closely[59,60] and that a strong relationship between deprivation and health is consistently found, however measured. The reasons for this relationship existing and persisting are complex but include that health and health-related behaviours tend to be poorer in more disadvantaged areas and that the range of resources and facilities which might promote health are less common in poorer areas.[61]

Deaths during the first year of life tend to be concentrated in the first week (early neonatal) or month (neonatal) and, during this period, causes of infant deaths tend to be different from those occurring later. The infant mortality rate can therefore be broken down into the early and late neonatal rates and the postneonatal mortality rate (deaths after 28 days). During the late 20th century the declines in neonatal mortality rates were relatively steady at national level but the decline in postneonatal rates was much smaller. As noted before, social class differences in infant mortality rates have been found to be wider in the postneonatal than the neonatal period.[15] Given changes in the major causes of infant deaths over time, an examination of the association between socio-economic and health care factors (such as the fall in sudden infant deaths) may be informative.

Previous research has found that when small areas become more or less deprived over time the health experience of the population responds accordingly.[49] Although infant mortality reduced even in areas where relative deprivation worsened, the biggest reductions were found for those areas where deprivation eased. Even in relatively advantaged regions and area types, to complement policy aimed at addressing social inequalities, resources targeted at relatively deprived areas may help reduce infant mortality.

## Key findings

- Infant mortality rates for England and Wales fell rapidly from the early 1970s and into the 1980s and then slowed to 2006
- Infant mortality fell in subnational areas, but this was not evenly distributed. The Government Office Regions of Yorkshire and The Humber, the North West and the West Midlands and the ONS local authority types Cities and Services and London Cosmopolitan experienced relatively large absolute reductions in infant mortality but their rates remained high compared with the national average
- Within all Government Office Regions and local authority types a strong relationship existed between ward level deprivation and infant mortality rates, with highest rates in the most deprived areas
- Infant mortality reduced over time, even in the most deprived areas, with a narrowing of absolute differences in rates between areas
- Wards which became relatively less deprived experienced a reduction in infant mortality rates greater than that for national rates in England and Wales

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## References

1 Blaxter M (1981) *The health of children: a review of research on the place of health in cycles of disadvantage,* Heinemann Educational: London.
2 Botting B (1997) 'Mortality in childhood', in Drever F and Whitehead M (eds), *Health Inequalities: Decennial Supplement,* Series DS no.15, The Stationery Office: London.
3 Garrett E, Galley C, Shelton N and Woods R (eds) (2006), *Infant Mortality: A Continuing Social Problem,* Ashgate: Aldershot.
4 Department of Health (2007) 'Review of the Health Inequalities Infant Mortality PSA Target' accessed 22 October 2008, available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_065544
5 Freemantle J and Read A (2008) 'Preventing child deaths', *British Medical Journal* **336**, 1083–84.
6 Storeygard A, Balk D, Levy M and Deane G (2008) 'The global distribution of infant mortality: a subnational spatial view', *Population, Space and Place* **14**, 209–29.
7 Woodroffe C, Glickman M, Barker M and Power C (1993) *Children, Teenagers and Health: the Key Data,* Open University Press: Milton, Buckingham.
8 Bongaarts J (2006) 'How long will we live?', *Population and Development Review* **32**, 605–28.
9 Riley J C (2005) 'Estimates of regional and global life expectancy, 1800–2001', *Population and Development Review* **31**, 537–43.
10 Hobcraft J, McDonald J and Rutstein S O (1984) 'Socioeconomic factors in infant and child mortality: a cross-national perspective', *Population Studies* **38**, 193–223.
11 Office for National Statistics (2005) *Mortality statistics: Childhood, infant and perinatal. Review of the Registrar General on deaths in England and Wales*, Series DH3 no.38, Her Majesty's Stationery Office: London. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6305
12 Cooper N (2001) 'Analysis of infant mortality by risk factors and by cause of death, in England and Wales', in Griffiths C and Fitzpatrick J (eds), *Geographic variations in health. Decennial supplement.* Series DS no.16, The Stationery Office: London.
13 Schuman J (1998) 'Childhood, infant and perinatal mortality, 1996; social and biological factors in deaths of children aged under 3', *Population Trends* **92**, 5–14. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6303
14 Spencer N J, Logan S and Gill L (1999) 'Trends and social patterning of birthweight in Sheffield, 1985–94', *Archives of Disease in Childhood Fetal & Neonatal Edition* **81**, F138–40.
15 Maher J and Macfarlane A (2004) 'Inequalities in infant mortality: trends by social class, registration status, mother's age and birthweight, England and Wales, 1976–2000', *Health Statistics Quarterly* **24,** 14–22. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
16 Hargreaves S (2007) 'Gaps between UK social groups in infant mortality are widening', *British Medical Journal* **334**, 335.
17 Marmot M G (2003) 'Understanding Social Inequalities in Health', *Perspectives in Biology and Medicine* **46(3)**, S9–S23.
18 Botting B and Macfarlane A (1990) 'Geographic variation in infant mortality in relation to birthweight 1983–85 in Britton M (ed), *Mortality and Geography,* Series DS no.9, Her Majesty's Stationery Office: London.

19 Office for Population Censuses and Surveys (1978) *Occupational mortality. The Registrar General Decennial Supplement for England and Wales 1970–1972,* Series DS no.1, Her Majesty's Stationery Office: London.

20 Lee C (1991) 'Regional inequalities in infant mortality in Britain, 1861–1971: patterns and hypotheses', *Population Studies* **45**, 55–65.

21 Marsh D C (1965) *The Changing Social Structure of England and Wales 1871–1961,* Routledge and Kegan Paul: London.

22 Fitzpatrick J and Cooper N (2001) 'Patterns and trends in stillbirths and infant mortality', in Griffiths C and Fitzpatrick J (eds), *Geographic Variations in Health,* Series DS no.16, The Stationery Office: London, 161–90.

23 Guildea Z E S, Fone D L, Dunstan F D and Cartlidge P H T (2005) 'Differences in risk of mortality under 1 year of age between rural and urban areas: an ecological study', *Public Health* **119**, 442–47.

24 Haines M (1995) 'Socio-economic Differentials in Infant and Child Mortality during Mortality Decline: England and Wales 1890–1911', *Population Studies* **49 (2)**, 297–315.

25 Webster C (1985) 'Health, welfare and unemployment during the depression', *Past and Present* **109**, 204–29.

26 Woods R (2003) 'Urban-rural mortality differentials: an unresolved debate', *Population and Development Review* **29**, 29–46.

27 Wallace M, Charlton J and Denham C (1995) 'The new OPCS area classifications', *Population Trends* **79**, 15–30.

28 Carstairs V (1981) 'Small area analysis and health service research', *Community Medicine* **3**, 131–39.

29 Hirst K, Butler N and Dawkins M (1968) 'Infant and Perinatal Mortality in England and Wales', *National Centre for Health Statistics, Vital and Health Statistics* **3(12)**.

30 Kmietowicz Z (2001) 'Health gap between rich and poor in London widens', *British Medical Journal* **323**, 828.

31 Marr T (1978) 'Infant mortality mirrors deprivation', *Health & Social Service Journal*, 750.

32 Dibben C, Sigala M and Macfarlane A (2006) 'Area deprivation, individual factors and low birth weight in England: is there evidence of an "area effect"?', *Journal of Epidemiology and Community Health* **60**, 1053–59.

33 Collis D and Hooper J (2008) *Infant deaths in north Kirklees,* Kirklees Primary Care Trust, Huddersfield. Accessed 23 October 2008, available at: www.kirklees.nhs.uk/public-information/publications/infant-deaths-in-north-kirklees/

34 Dyer O (2008) 'Neonatal service reorganisation fails to iron out regional variation in death rates', *British Medical Journal* **336**, 1393.

35 Evans S (2005) *Mortality in children and young people in the East of England,* Eastern Region Public Health Observatory. Accessed 23 October 2008, available at: www.erpho.org.uk/viewResource.aspx?id=12553

36 Dorling D, Rigby J, Wheeler B *et al* (2007) *Poverty, wealth and place in Britain, 1968 to 2005*, Policy Press: Bristol.

37 Gregory I N and Ell P S (2005) 'Breaking the boundaries: Integrating 200 years of the Census using GIS', *Journal of the Royal Statistical Society A, Statistics in Society* **168**, 419–37.

38 Norman P (2006) 'Sociodemographic spatial change in the UK: data and computational issues and solutions', *GIS Development special issue Maps & Census* **10(12)**, 30–34.

39 Norman P, Rees P and Boyle P (2003) 'Achieving data compatibility over space and time: creating consistent geographical zones', *International Journal of Population Geography* **9(5)**, 365–86.

40 Simpson L (2002) 'Geography conversion tables: a framework for conversion of data between geographical units', *International Journal of Population Geography* **8**, 69–82.

41 Bates A (2008) 'The development of a postcode best fit methodology for producing population estimates for different geographies', *Population Trends* **133**, 28–34. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6303

42 Office for National Statistics (2004) *National Statistics 2001 Area Classification.* Available on the Office for National Statistics website at: www.statistics.gov.uk/about/methodology_by_theme/area_classification/default.asp

43 Vickers D and Rees P (2006) 'Introducing the Area Classification of Output Areas', *Population Trends* **125**, 15–29. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6303

44 Townsend P, Phillimore P and Beattie A (1988) *Health and deprivation: inequality and the north*, Croom Helm: London.

45 Gordon D (1995) 'Census Based Deprivation Indices: Their Weighting and Validation', *Journal of Epidemiology and Community Health* **49 (Suppl 2)**, S39–S44.

46 Bradford M G, Robson B T and Tye R (1995) 'Constructing an urban deprivation index: a way of meeting the need for flexibility', *Environment and Planning A* **27**, 519–33.

47 Senior M L (2002) 'Deprivation indicators', in Rees P, Martin D and Williamson P (eds), *The Census Data System,* John Wiley: Chichester, 123–37.

48 Eroğlu S (2007) 'Developing an index of deprivation which integrates objective and subjective dimensions: extending the work of Townsend, Mack and Lansley, and Halleröd', *Social Indicators Research* **80**, 493–510.

49 Boyle P, Norman P and Rees P (2004) 'Changing places: do changes in the relative deprivation of areas influence limiting long-term illness and mortality among non-migrant people living in non-deprived households?', *Social Science & Medicine* **58**, 2459–71.

50 Bland M (2000) *An introduction to medical statistics,* Oxford University Press: Oxford.

51 Coleman D and Salt J (1992) *The British Population: Patterns, Trends and Processes,* Oxford University Press: Oxford.

52 United Nations (2007) *World Population Prospects. The 2006 Revision,* Department of Economic and Social Affairs, Population Division, United Nations.

53 Shelton N (2006) 'Conclusion: the social dimension to infant well-being', in Garrett E, Galley C, Shelton N and Woods R (eds), *Infant mortality: a Continuing Social Problem,* Ashgate: Aldershot, 249–60.

54 Whitehead M and Drever F (1999) 'Narrowing social inequalities in health? Analysis of trends in mortality among babies of lone mothers', *British Medical Journal* **318**, 908–14.

55 Norman P, Boyle P and Rees P (2005) 'Selective migration, health and deprivation: a longitudinal analysis', *Social Science & Medicine* **60(12)**, 2755–71.

56 Brimblecombe N, Dorling D and Shaw M (2000) 'Migration and geographical inequalities in health in Britain', *Social Science & Medicine* **50**, 861–78.

57 Mackenzie I F, Nelder R, Maconachie M and Radford G (1998) 'My ward is more deprived than yours', *Journal of Public Health Medicine* **20**, 186–90.

58 Davey Smith G, Whitley E, Dorling D and Gunnell D (2001) 'Area based measures of social and economic circumstances: cause specific mortality patterns depend on the choice of index', *Journal of Epidemiology and Community Health* **55**, 149–50.

59 Morris R and Carstairs V (1991) 'Which deprivation? A comparison of selected deprivation indexes', *Journal of Public Health Medicine* **13(4)**, 318–26.

60 Hoare J (2003) 'Comparison of area-based inequality measures and disease morbidity in England, 1994–98, *Health Statistics Quarterly* **18**, 18–24. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725

61 Macintyre S, Macdonald L and Ellaway A (2008) 'Do poorer people have poorer access to local resources and facilities? The distribution of local resources by area deprivation in Glasgow, Scotland', *Social Science & Medicine* **67**, 900–14.

# Standardised Mortality Ratios – the effect of smoothing ward-level results

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**Geographical indicators of mortality provide one of the most important means of assessing the health of populations and are particularly effective in identifying inequalities in health. Geographical mortality indicators have regularly been produced by the Office for National Statistics, but not normally for areas smaller than local authorities. In order to allow variations in mortality within local authorities to be examined, in 2006 ONS published Standardised Mortality Ratios (SMRs) for wards in England and Wales, based on deaths in 1999–2003. For mortality indicators for small populations, based on small numbers of deaths, there is however a risk that results will be unstable, making geographical patterns hard to interpret. To examine whether this problem could be overcome, methods for smoothing SMRs in time and space were considered, with conclusions published in a methodology report in 2007. This article presents results from that work, illustrating the geographical patterns in mortality that emerge following smoothing of the ward-level SMRs.**

## Introduction

The Office for National Statistics (ONS) and its predecessor organisations have long reported on geographical differences in mortality. Although analyses have regularly been produced for regions and local authority administrative areas, they have not been routinely produced for smaller areas. When, in 2001, ONS reported on the large inequalities in life expectancy at birth that exist between local authorities in the UK, it was noted that the analysis was subject to a number of limitations.[1] As local authorities vary substantially in size, ananalysis at that geographical level could not examine variations in mortality within large authorities such as Birmingham and Manchester. It was also noted that there are known to be substantial variations in mortality at small area level within most local authorities that cannot be captured by authority level analysis.

In order to address the need to examine variations in mortality within local authorities, in April 2006 ONS published Standardised Mortality Ratios (SMRs) for wards in England and Wales, based on deaths under age 85 in 1999–2003.[2] (Ward-level figures for life expectancy at birth for the same period were also published in June 2006.)[3] The results demonstrated that big variations in mortality could exist within local authorities. In Liverpool, for example, a large authority with an overall high level of mortality, SMRs for wards ranged from 84 to 204. Even though mortality data were aggregated over a five-year period, many of the published results were however still based on rather small numbers of deaths. This leads to a risk that the SMRs may be unstable, with results illustrating chance variations in numbers of deaths between wards, rather than real underlying patterns of mortality.

To examine this potential problem some research was carried out to consider basic methods for smoothing the ward-level SMRs in time and space.

## Smoothing

Abrupt variations in data, whether in a time series or between geographical areas, may make it hard to detect meaningful underlying patterns. Such variations may be due to real, underlying changes; to noise (caused by measurement or sampling error or random variation); or to a mixture of these. Smoothing is the application of procedures to remove noise from data. This can be done over time, across space, or a combination of the two. The objective of smoothing methods is to enhance the visibility of underlying trends in noisy data.

With ward-level SMRs, noise can arise from random mortality – numbers of deaths that cannot be predicted and which do not correlate with an underlying component. The aim of smoothing SMRs is therefore to reduce or eliminate this noise, to better uncover the underlying pattern.

The magnitude of noise is related to both population size and underlying mortality rates but smoothing can help to stabilise rates based on small numbers of deaths. Time smoothing can be used to reduce abrupt changes in mortality from year to year to reveal underlying local variation. The SMRs were also considered amenable to spatial smoothing as there is a high probability that underlying patterns of mortality may well cross small area boundaries. Spatial smoothing can therefore provide indications of possible patterns that might otherwise be difficult to detect.[4] Data that have been smoothed can be used to produce maps from which geographical patterns previously hidden by noise can be uncovered.[5]

Ideally, smoothing will obtain the best estimate of underlying mortality by reducing noise but still retain useful information about local variation. While noise is reduced as much as possible, substantial local differences should still be evident if the smoothing procedure is effective. A smooth estimate of underlying mortality does not necessarily mean a better estimate. It is certainly possible to over-smooth. For example, the smoothest estimate for each ward is the national mortality rate. While this is certainly very stable, it has the unwanted side effect of removing all local variation from the data.

## Data and methods

A note on the calculation and interpretation of SMRs can be found in Box One. Ward-level results were calculated using deaths registered in England and Wales from 1999–2003. Published figures were based on five aggregated years of data to try to provide a reasonable number of deaths for each ward. The two years either side of 2001 were selected, as population estimates for wards were only available for 2001 and 2002. Only records where the age at death was less than 85 were selected as it is known that some wards have particularly large proportions of their total population in nursing homes. As age-specific mortality in nursing homes is higher than in the general population it may appear that death rates in these areas are unexpectedly high. Deaths at age 85 and above were therefore excluded from the calculations to partly ameliorate this effect. Deaths were assigned to 2001 Census Standard Table wards based on the place of usual residence of the deceased.

The ward populations used were 2001 experimental population estimates for census wards. Due to the small populations of the City of London and Isles of Scilly, population estimates were not produced for the individual wards within these areas, but were calculated for the two local authorities as a whole.

The SMRs were standardised using age-specific rates for England and Wales from 1999–2003. These were based on deaths registered in 1999–2003 and mid-year population estimates from 1999–2003. By aggregating mortality data for five years, the SMRs published by ONS had already, in effect, been smoothed over time. In order to consider other mechanisms for time smoothing the data, we also used SMRs calculated for the single years 1999–2003, and results for three periods where deaths were aggregated over three years: 1999–2001, 2000–02, and 2001–03. All of the SMRs, whether for five, three or single years, were calculated using only the ward population estimates for 2001 however.

Using these SMRs, a selection of simple time and space smoothing techniques were defined and applied to the ward-level results. The objective was to establish whether spatial smoothing methods could provide more stable estimates of underlying patterns of mortality from the published ward-level SMRs, and to identify which approaches were most suitable for application.

A range of simple techniques for smoothing in space were tested, by replacing the individual value for each target ward by a weighted average of itself and its neighbours. Neighbours were defined as first order (immediate) and second order (neighbours of first order neighbours) and with two types of weights: equal (where all wards under consideration have equal influence) and tapering over space (where the contribution of neighbouring wards tails off as we move farther away from the target ward).

The number of neighbours per ward ranged from 0 (for one area: Isles of Scilly) to 19 first order neighbours and 43 second order neighbours. The average number of first order neighbours per ward was 5.9 and the average number of second order neighbours was 14.3.

The best performing spatial smoother in this study used weights that differentiated between first and second order neighbours, with slightly

### Box one

#### Standardised Mortality Ratios (SMRs)

SMRs are a means of measuring mortality which takes into account the age structure of the population being considered. They are calculated by using a standard set of age-specific death rates (such as results for England and Wales) which are used to calculate how many deaths would be expected in a particular population, given its size and age structure. This gives a total number of 'expected' deaths. This figure is then compared with the actual number of 'observed' deaths which did take place. For example, given national death rates the number of deaths in a particular ward might be expected to be 80 but only 40 were observed. The SMR is then the ratio of the observed to expected or 40 divided by 80. For presentational purposes the ratios are normally multiplied by 100. The formula is therefore:

$$SMR = \frac{Observed}{Expected} \times 100$$

An SMR could therefore be defined as the ratio of the observed number of deaths in a ward to the number expected if the ward had the same age-specific rates as England and Wales.

As national death rates were used as the standard for the results, the SMR for England and Wales is 100. The results for wards therefore allow their mortality experience to be compared with the national average. If an SMR is less than 100 that means the number of deaths for a ward was less than would have been expected. Conversely if an SMR is greater than 100 the number of deaths was greater than expected.

higher weight for the first order neighbours relative to the second order ones. The techniques chosen, and methods used in the analysis, are described in detail in a report published as part of the National Statistics Methodological Series.[6] The report includes evaluations of the performance of the simple smoothing solutions defined, identifies the most suitable simple smoothing solution for the SMR data under analysis and indicates the direction for future work in relation to smoothing SMRs.

The published ward SMRs were for both sexes combined, and males and females separately (standardised with sex-specific mortality rates). The smoothing study however used examples only for all persons, and it is these results which are illustrated here.

## Results

The 8,797 wards for which SMRs were calculated had an average population in 2001 of just over 5,800 for those aged under 85. Population size differed considerably across England and Wales, from just under 1,000 in some of the smallest wards in Wales, to over 35,000 in the largest ward in Birmingham. This variation was reflected in the annual number of deaths. In 2001 the mean number of deaths under age 85 per ward was 41. Three wards however had only one death in this year, while one ward in Birmingham had 241.

SMRs based on data for a single year would, for some wards, therefore be based on very small numbers of deaths, with the risk of inherent instability. This was evident when SMRs for the five single years from 1999–2003 were examined. Standard deviations for the SMRs, which quantify variability by measuring the dispersion of values from the mean, differed considerably between wards. Standard deviations ranged from 1 to 74. (If all SMRs had been the same in each of the five years the standard deviation would have been zero and increasing results indicate greater variability.) Thus while a small number of wards had SMRs which were similar across all years, others, such as one ward in Northampton, had SMRs which ranged between 59 and 208. Just over three-quarters of wards had a standard deviation which was greater than 10.

Using results for a single year would therefore produce geographical patterns from which it would be hard to discern underlying patterns of mortality. This can be seen in Map 1 where SMRs based only on deaths in 2001 are illustrated. The map presents the SMRs grouped into six categories, each containing an equal numbers of wards. (In the map's legend, ranges for the categories appear to overlap as they have been rounded to whole numbers.) Although some patterns are apparent in the map, because of the variability of the SMRs for single years, it is hard to judge whether these are real, reflecting genuine underlying differences in mortality between areas, or whether they are spurious, a result of random variation in numbers of deaths.

Map 2 illustrates the SMRs which were published by ONS, with data aggregated for 1999–2003 — results which have in effect been smoothed in time. While Map 1 contains 1,466 wards in each category, in Map 2 there are more wards in the middle ranges and fewer wards in the highest and lowest categories (1,272 wards in the highest range of SMRs and only 732 wards in the lowest range). Map 2 does still show some sharp variations in mortality between wards, but patterns are easier to see than in Map 1. Despite the time-smoothed results being more stable than those for single years, the mortality patterns in Maps 1 and 2 do appear similar in some areas, and it may be surprising that there is not greater contrast between the two. This may be partly related to the division of results into sixths and, in particular, to the width of the upper and lower bands used. Some wards had big differences between SMRs for 1999 and 1999–2003, for example, one ward had an SMR of 226 for 1999 but only 126 for 1999–2003. The latter result still placed this ward in the sixth of areas with the highest SMRs however, and so it is shaded the same in both Maps 1 and 2.

Using the best performing spatial smoother in our study, the time-smoothed SMRs illustrated in Map 2 were also smoothed in space. The advantages of this spatial smoothing can clearly be seen in Map 3, especially when it is compared with Map 2. Patterns of mortality, which cross ward boundaries, are far easier to discern and it is simple to see, for example, the areas of high mortality around urban areas in the north east and north west, and across south Wales and parts of inner London. Compared with Map 2, there is a further concentration of wards in the central ranges. In Map 3 only 109 wards had an SMR in the lowest range and 769 had an SMR in the highest range. In contrast the middle two ranges (SMRs of 83–93 and 93–105) had 2,511 and 2,114 wards, respectively.

## Discussion

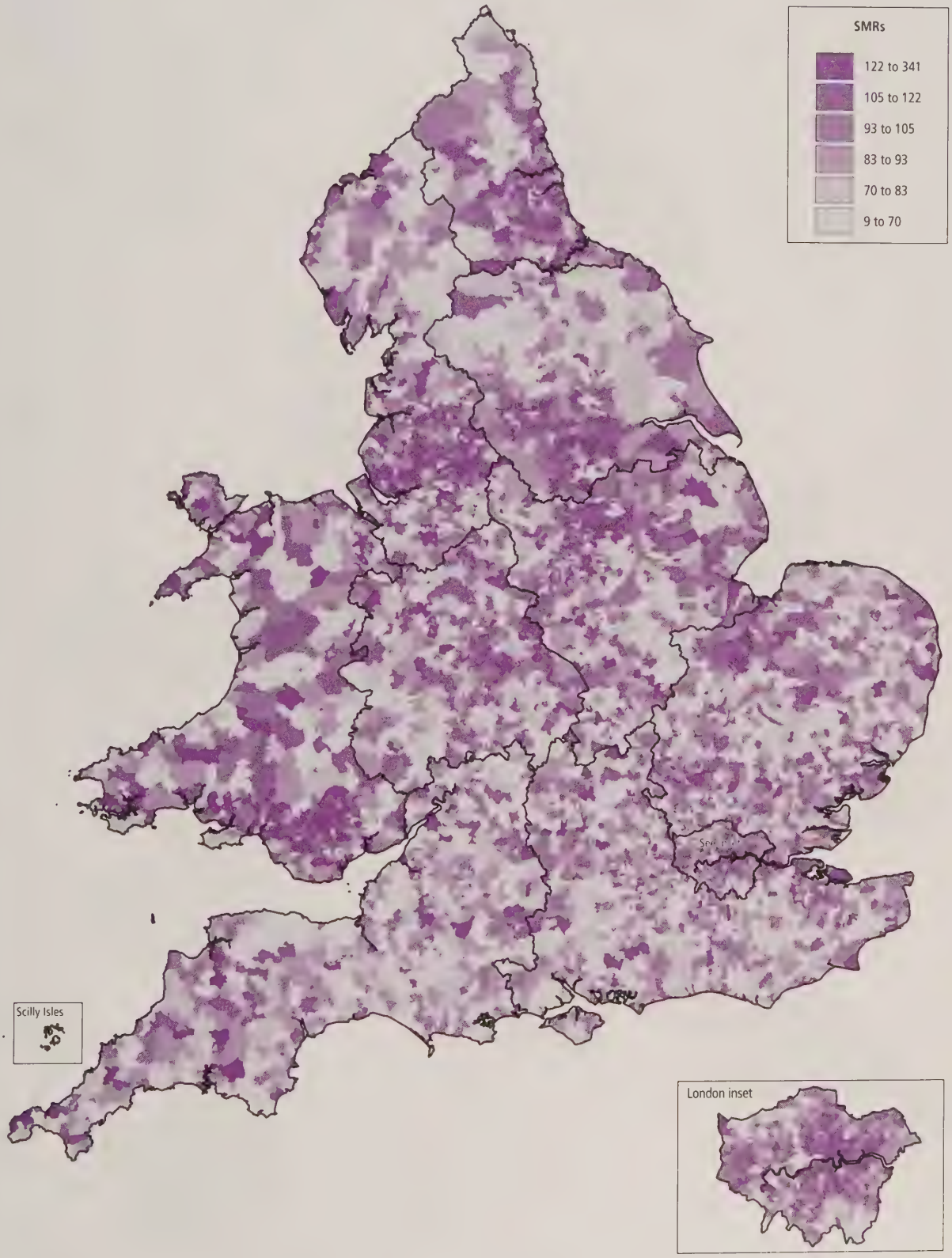
The results shown here illustrate the potential benefit of smoothing ward-level SMRs across time and space, by reducing noise and thereby revealing underlying patterns of mortality.

Although our initial findings are promising, there are some challenges and problems raised by smoothing. Different smoothing techniques will produce different results when applied to the same data. Within a given technique, the outcome of smoothing is also closely linked to the choice of smoothing parameters (time span, area covered, specific weights): the larger the degree of smoothing, the smaller the variance of the smoothed value (by reducing the size of random errors) and the larger the bias (the amount that the smoothed value is different from the raw value). Reduction in variance at the cost of increased bias in the smoothed value is the fundamental trade-off in all smoothing methods. Some data users may be concerned about the differences between raw and smoothed values (which may be large), although the potential benefits of smoothing may outweigh these concerns.

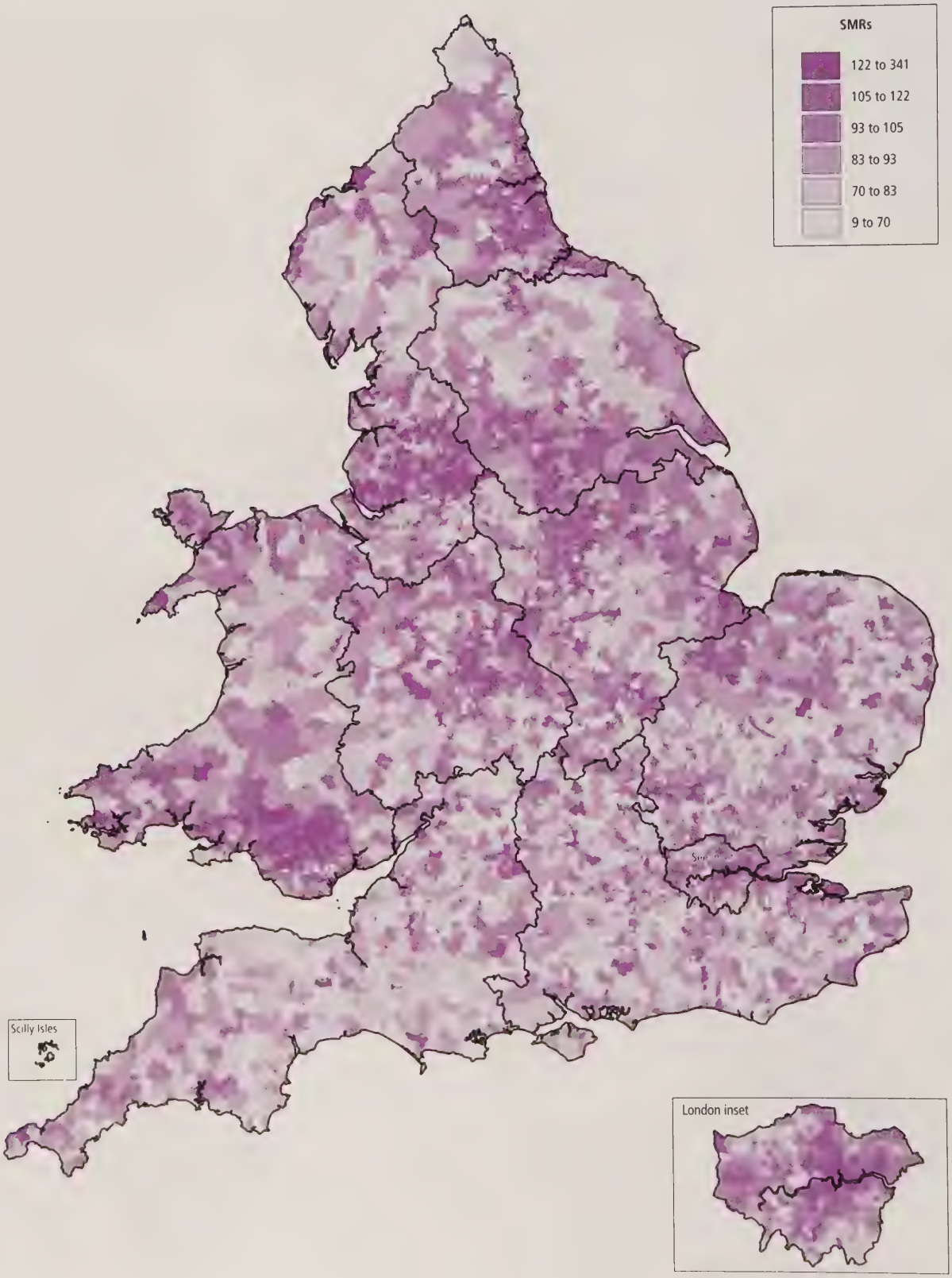
Although the smoothed SMRs we produced do illustrate the added benefit provided by smoothing in space, the spatial smoothers that we considered were very simple, based on contiguity between neighbouring wards. These were selected as this was the first project by ONS to examine spatial smoothing and simple methods were thought appropriate to best convey the essence of the technique. They also provided results which could be used in an exploratory way by allowing the visualisation of underlying geographical patterns of mortality. Further work is needed however to compare the performance of these simple methods with more sophisticated techniques. Bayesian inference methods, in particular, have been advocated as smoothing solutions when mapping the risk of disease or mortality.[7,8,9,10] The investigation of such methods would help to ensure best practice for the publication of smoothed mortality indicators for small areas in the future.

Our study showed however that the time-smoothed estimates, calculated using five years of mortality data, performed well in our evaluation. The published SMRs for 1999–2003 therefore still retain an inherent value.

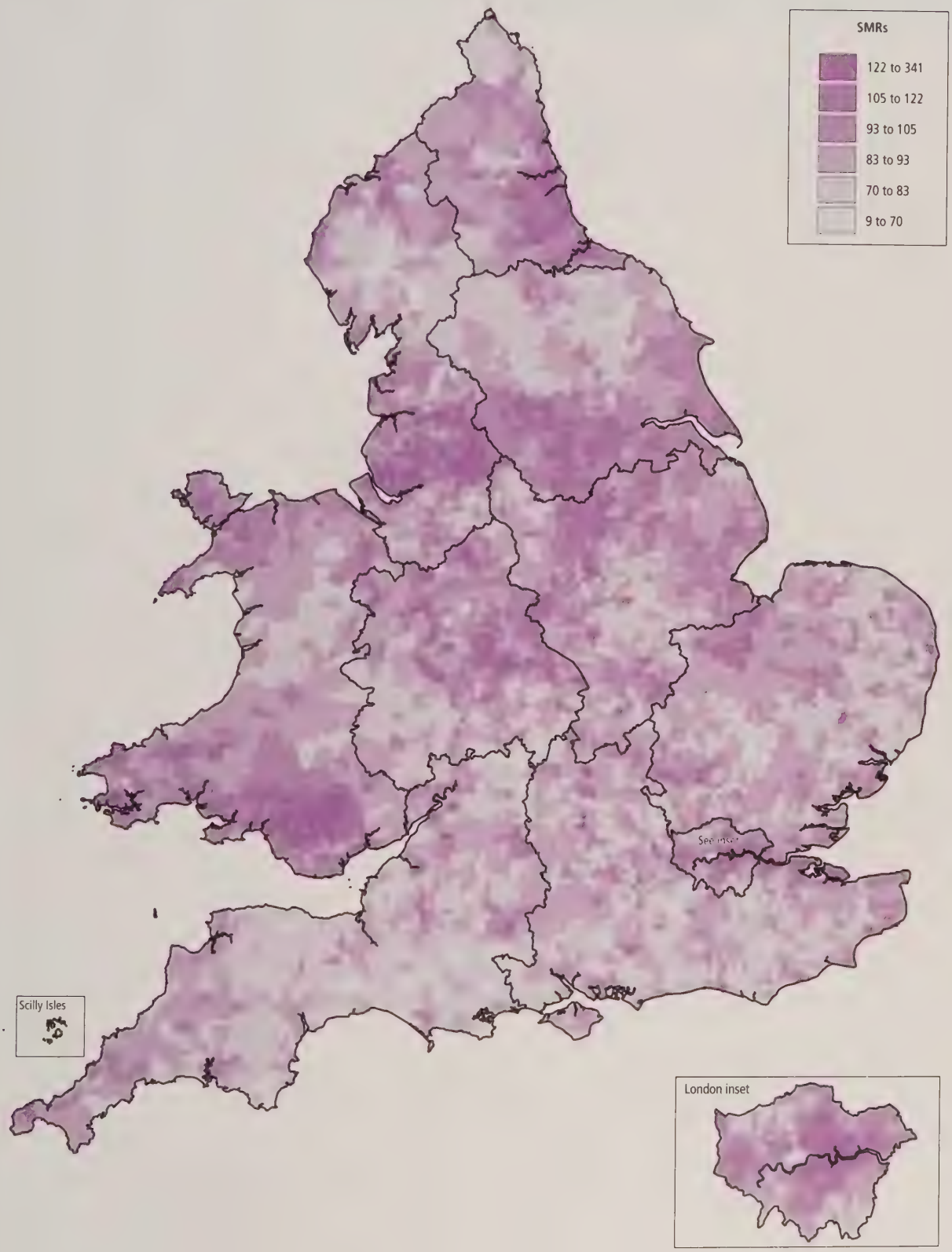
**Map 1** SMRs for all persons aged under 85, 2001, England and Wales



**Map 2** SMRs for all persons aged under 85, 1999 to 2003, England and Wales



**Map 3** Time and spatially-smoothed SMRs for all persons aged under 85, 1999 to 2003, England and Wales



## Acknowledgements

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## Key findings

- Ward-level SMRs based on mortality data for a single year can be highly variable. Resulting geographical patterns may be a result of random variation in the number of deaths, rather than reflecting genuine underlying differences in mortality rates between areas
- Time smoothing SMRs, by basing figures on five years of mortality data, produces more stable results
- Spatially smoothing the time-smoothed results adds further benefit, producing patterns of mortality which are easier to discern when mapped
- Work is needed to investigate further smoothing techniques if ONS is to publish smoothed mortality indicators for small areas in the future

## References

1. Griffiths C and Fitzpatrick J (2001) 'Geographic Inequalities in Life Expectancy in the United Kingdom, 1995–1997', *Health Statistics Quarterly* **9**, 16–28. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
2. Office for National Statistics (2006) Standardised Mortality Ratios for wards in England and Wales. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14359
3. Office for National Statistics (2006) Life expectancy at birth for wards in England and Wales, 1999–2003 (experimental statistics). Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14466
4. Kafadar K (1996) 'Smoothing geographical data, particularly rates of disease', *Statistics in Medicine*, **15.23**, 2539–60.
5. Cowling A, Chambers R, Lindsay R and Parameswaran B (1996) 'Applications of spatial smoothing to survey data', *Survey Methodology*, **22.2**, 175–83.
6. Carrington A, Ralphs M, Mitchell B *et al* (2007) 'Smoothing of Standardised Mortality Ratios, A Preliminary Investigation', National Statistics Methodological Series no. 35. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14972
7. Jarup L and Best N (2003) Editorial comment on Geographical differences in cancer incidence in the Belgian Province of Limburg by Bruntinx and colleagues. *European Journal of Cancer*, Volume **39**, Issue 14, 1973–75.
8. Best N G, Richardson S and Thomson A (2005) 'A comparison of Bayesian spatial models for disease mapping', *Statistical Methods in Medical Research* **14**, 35–59.
9. Elliott P and Savitz D A (2008) 'Design Issues in Small-Area Studies of Environment and Health', *Environmental Health Perspectives* Volume **116**, Number 8, 1098–1104.
10. Best N G, Arnold R A, Thomas A *et al* (1999) 'Bayesian models for spatially correlated disease and exposure data', in Bernardo J M, Berger J O, David A P and Smith A F M (eds), *Bayesian statistics* **6**, 131–56.

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# Notes to tables

### Time series
For most tables, years start at 1971 and then continue at five-year intervals until 1991. Individual years are shown thereafter. If a year is not present the data are not available.

### United Kingdom
The United Kingdom comprises England, Wales, Scotland and Northern Ireland. The Channel Islands and the Isle of Man are not part of the United Kingdom.

### Population
The estimated resident population of an area includes all people who usually live there, whatever their nationality. Members of HM and US Armed Forces in England and Wales are included on residential basis wherever possible. HM Forces stationed outside England and Wales are not included. Students are taken to be resident at their term time addresses.

Further information on population estimates is available on the National Statistics website at: www.statistics.gov.uk/popest

### Live births
For England and Wales, figures relate to the number of births occurring in a period; for Scotland and Northern Ireland, figures relate to births registered in a period. By law, births must be registered within 42 days in England and Wales, within 21 days in Scotland, and within 42 days in Northern Ireland. In England and Wales, where a birth is registered later than the legal time period, and too late to be included in the count for the year of occurrence, it will be included in the count for the following year.

### Perinatal mortality
In October 1992 the legal definition of a stillbirth was changed, from a baby born dead after 28 completed weeks of gestation or more, to one born dead after 24 completed weeks of gestation or more.

### Period expectation of life
The life tables on which these expectations are based use death rates for the given period to describe mortality levels for each year. Each individual year shown is based on a three-year period, so that for instance 1986 represents 1985–87. More information is available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14459

### Deaths
Figures for England and Wales relate to the number of deaths registered in each year up until 1992, and the number of deaths occuring in a year between 1993 and 2005. From 2006 onwards, all figures relate to the number of deaths registered in the year. All figures for Scotland and Northern Ireland relate to the number of deaths registered in each year.

### Coding cause of death
Between 1 January 1984 and 31 December 1992, ONS applied its own interpretation of the International Classification of Diseases (ICD) Section Rule 3 in the coding of deaths where terminal events and other 'modes of dying' such as cardiac arrest, cardiac failure, certain thrombembolic disorders, and unspecified pneumonia and bronchopneumonia, were stated by the certifier to be the underlying cause of death and other major pathology appeared on the certificate. In these cases ONS Rule 3 allowed the terminal event to be considered a direct sequel to the major pathology and that primary condition was selected as the underlying cause of death. Prior to 1984 and between 1 January 1993 and 31 December 2000, such certificates were coded to the terminal event. National Statistics also introduced automated coding of cause of death in 1993, which may also affect comparisons of deaths by cause from 1993. Further details can be found in the annual volumes *Mortality statistics: Cause 1984*, Series DH2 no. 11, and *Mortality statistics: Cause 1993 (revised) and 1994*, Series DH2 no. 21.

From 1 January 2001, under ICD-10, Rule 3 has again been changed – for details see the article in *Health Statistics Quarterly*13. This has resulted in a fall in the death rates from respiratory diseases, notably pneumonia, and consequently slight rises in the rates for other causes eg. strokes. For details of the major changes between ICD-9 and ICD-10, see the articles in *Health Statistics Quarterly* 08, 13 and 14.

### Age-standardised mortality rates
Directly age-standardised rates make allowances for changes in the age structure of the population. The age-standardised rate for a particular condition is that which would have occurred if the observed age-specific rates for the condition had applied in a given standard population. Tables 2.2 and 6.3 use the European Standard Population. This is a hypothetical population standard which is the same for both males and females allowing standardised rates to be compared for each sex, and between males and females.

### Abortions
Figures relate to numbers occurring in a period.

### Calculating quarterly rates
Quarterly rates are calculated using seasonal adjustments which take into account the number of days in the month/year. The denominators used for calculating quarterly rates have been produced from mid-year population estimates and projections.

### Marriages and divorces
Marriages are tabulated according to date of solemnisation. Divorces are tabulated according to date of decree absolute. In Scotland a small number of late divorces from previous years are added to the current year. The term 'divorces' includes decrees of nullity. The fact that a marriage or divorce has taken place in England, Wales, Scotland or Northern Ireland does not necessarily mean that either of the parties is resident there.

### Civil Partnerships
The Civil Partnership Act 2004 came into force on 5 December 2005 in the UK, the first day couples could give notice of their intention to form a civil partnership. The first day that couples could normally form a partnership was 19 December 2005 in Northern Ireland, 20 December 2005 in Scotland and 21 December 2005 in England and Wales.

Civil partnerships are tabulated according to date of formation and area of occurrence. The fact that a civil partnership has taken place in England, Wales, Scotland or Northern Ireland does not necessarily mean either of the parties is resident there.

### Sources
Figures for Scotland and Northern Ireland have been provided by the General Register Office for Scotland and the Northern Ireland Statistics and Research Agency respectively.

### Rounding
All figures are rounded independently; constituent parts may not add to totals. Generally numbers and rates per 1,000 population are rounded to one decimal place (for example 123.4); where appropriate, for small figures (below 10.0), two decimal places are given (for example 7.62). Figures which are provisional or estimated are given in less detail (for example 123 or 7.6 respectively) if their reliability does not justify giving the standard amount of detail. Where figures need to be treated with particular caution, an explanation is given as a footnote.

### Latest figures
Figures for the latest quarters and years may be provisional and will be updated in future issues when later information becomes available. Where figures are not yet available, cells are left blank.

## Table 1.1 Population and vital rates: international

Selected countries

Numbers (thousands)/Rates per thousand

| Year | United Kingdom | Austria | Belgium | Bulgaria | Cyprus[1] | Czech Republic | Denmark | Estonia | Finland | France | Germany[2] | Greece[3] | Hungary |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Population (thousands)** | | | | | | | | | | | | | |
| 1971 | 55,928 | 7,501 | 9,673 | 8,540 | 610 | 9,810 | 4,963 | 1,369 | 4,612 | 51,251 | 78,313 | 8,831 | 10,370 |
| 1976 | 56,216 | 7,566 | 9,818 | 8,760 | 498 | 10,094 | 5,073 | 1,435 | 4,726 | 52,909 | 78,337 | 9,167 | 10,590 |
| 1981 | 56,357 | 7,569 | 9,859 | 8,891 | 515 | 10,293 | 5,121 | 1,482 | 4,800 | 54,182 | 78,408 | 9,729 | 10,712 |
| 1986 | 56,684 | 7,588 | 9,862 | 8,958 | 545 | 10,340 | 5,120 | 1,534 | 4,918 | 55,547 | 77,720 | 9,967 | 10,631 |
| 1991 | 57,439 | 7,813 | 9,979 | 8,982 | 587 | 10,309 | 5,154 | 1,566 | 5,014 | 57,055 | 79,984 | 10,247 | 10,346 |
| 1996 | 58,164 | 7,959 | 10,137 | 8,363 | 661[12] | 10,315 | 5,262 | 1,416 | 5,125 | 58,026 | 81,896 | 10,709 | 10,193 |
| 2001 | 59,113 | 8,043 | 10,287 | 7,910 | 701[12] | 10,224 | 5,359 | 1,364 | 5,188 | 59,322 | 82,340 | 10,950 | 10,188 |
| 2002 | 59,323 | 8,084 | 10,333 | 7,869 | 710[12] | 10,201 | 5,374 | 1,359 | 5,201 | 59,678 | 82,482 | 10,988 | 10,159 |
| 2003 | 59,557 | 8,118 | 10,376 | 7,824 | 721[12] | 10,202 | 5,387 | 1,354 | 5,213 | 60,028 | 82,520 | 11,024 | 10,130 |
| 2004 | 59,846 | 8,175 | 10,421 | 7,781 | 737[12] | 10,207 | 5,401 | 1,349 | 5,228 | 60,381 | 82,501 | 11,062 | 10,107 |
| 2005 | 60,238 | 8,233 | 10,479 | 7,740 | 758[12] | 10,234 | 5,416 | 1,346 | 5,246 | 60,996 | 82,464 | 11,104 | 10,087 |
| 2006 | 60,587 | 8,280[p] | 10,511[p] | 7,680[p] | 766[12] | 10,280[p] | 5,427[p] | 1,345 | 5,270 | 61,350[p] | 82,370[p] | 11,150[p] | 10,077[p] |
| 2007 | 60,975 | .. | .. | .. | .. | .. | .. | 1,340[p] | 5,290[p] | .. | 82,260[p] | .. | .. |
| **Population changes (per 1,000 per annum)** | | | | | | | | | | | | | |
| 1971–76 | 1.0 | 1.7 | 3.0 | 5.2 | –36.7 | 5.8 | 4.4 | 9.6 | 4.9 | 6.5 | 0.1 | 7.6 | 4.2 |
| 1976–81 | 0.5 | 0.1 | 0.8 | 3.0 | 6.8 | 3.9 | 1.9 | 6.6 | 3.1 | 4.8 | 0.2 | 12.3 | 2.3 |
| 1981–86 | 1.2 | 0.5 | 0.1 | 1.5 | 11.7 | 0.9 | 0.0 | 7.0 | 4.9 | 5.0 | –1.8 | 4.9 | –1.5 |
| 1986–91 | 2.7 | 5.9 | 2.4 | 0.5 | 15.4 | –0.6 | 1.3 | 4.2 | 3.9 | 5.4 | 5.8 | 5.6 | –5.4 |
| 1991–96 | 2.5 | 3.7 | 3.6 | –13.8 | 25.2 | 0.1 | 4.2 | –12.4 | 3.8 | 3.4 | 4.8 | 9.0 | –3.0 |
| 1996–01 | 3.3 | 2.1 | 2.6 | –10.8 | 12.1 | –1.8 | 3.7 | –7.3 | 2.5 | 4.5 | 1.1 | 4.5 | –0.1 |
| 2001–02 | 3.5 | 5.1 | 4.5 | –5.2 | 12.8 | –2.2 | 2.8 | –3.7 | 2.5 | 6.0 | 1.7 | 4.4 | –2.8 |
| 2002–03 | 3.9 | 4.2 | 4.2 | –5.7 | 15.5 | 0.1 | 2.4 | –3.7 | 2.3 | 5.9 | 0.5 | 2.4 | –2.9 |
| 2003–04 | 4.8 | 7.0 | 4.3 | –5.5 | 22.2 | 0.5 | 2.6 | –3.7 | 2.9 | 5.9 | –0.2 | 3.4 | –2.3 |
| 2004–05 | 6.6 | 7.1 | 5.6 | –5.3 | 28.5 | 2.6 | 2.8 | –2.2 | 3.4 | 10.2 | –0.4 | 3.8 | –2.0 |
| 2005–06 | 5.8 | 5.7[p] | 3.1[p] | –7.8[p] | 10.6 | 4.5[p] | 2.0[p] | –0.7 | 4.6 | 5.8[p] | –1.1[p] | 4.1[p] | –1.0[p] |
| 2006–07 | 6.4 | .. | .. | .. | .. | .. | .. | –3.7[p] | 3.8[p] | .. | –1.3[p] | .. | .. |
| **Live birth rate (per 1,000 population per annum)** | | | | | | | | | | | | | |
| 1971–75 | 14.1 | 13.3 | 13.4 | 13.2 | 17.7 | 17.8 | 14.6 | 15.4 | 13.1 | 16.0 | 10.5 | 15.8 | 16.1 |
| 1976–80 | 12.5 | 11.5 | 12.5 | 15.1 | 19.0 | 17.1 | 12.0 | 15.0 | 13.6 | 14.1 | 10.5 | 15.6 | 15.8 |
| 1981–85 | 12.9 | 12.0 | 12.0 | 13.7 | 20.2 | 13.5 | 10.2 | 15.6 | 13.4 | 14.2 | 10.7 | 13.3 | 12.3 |
| 1986–90 | 13.7 | 11.6 | 12.1 | 12.7 | 18.8 | 12.7 | 11.5 | 15.5 | 12.7 | 13.8 | 9.8 | 10.6 | 11.8 |
| 1991–95 | 13.2 | 11.8 | 12.0 | 9.8 | 16.9 | 11.1 | 13.1 | 10.7 | 12.9 | 12.7 | 10.9 | 9.9 | 11.7 |
| 1996–00 | 12.0 | 10.2 | 11.2 | 8.3 | 13.2 | 8.8 | 12.6 | 8.9 | 11.3 | 12.7 | 9.6 | 10.2 | 9.8 |
| 2001 | 11.3 | 9.4 | 11.1 | 8.6 | 11.6 | 8.9 | 12.2 | 9.3 | 10.8 | 13.0 | 8.9 | 9.3 | 9.5 |
| 2002 | 11.3 | 9.7 | 10.8 | 8.5 | 11.1 | 9.6 | 11.9 | 9.6 | 10.7 | 12.7 | 8.7 | 9.5 | 9.5 |
| 2003 | 11.7 | 9.5 | 10.9 | 8.6 | 11.2 | 9.2 | 12.0 | 9.6 | 10.9 | 12.7 | 8.6 | 9.5 | 9.3 |
| 2004 | 12.0 | 9.7 | 11.1 | 9.0 | 11.3 | 9.6 | 11.9 | 10.4 | 11.0 | 12.7 | 8.6 | 9.6 | 9.4 |
| 2005 | 12.0 | 9.5 | 11.2 | 9.2 | 10.9 | 10.0 | 11.9 | 10.7 | 11.0 | 12.7 | 8.3 | 9.7 | 9.7 |
| 2006 | 12.4 | 9.3 | 11.5 | 9.6 | 11.3 | 10.3 | 12.0 | 11.1 | 11.2 | 13.0 | 8.2 | 10.0 | 9.9 |
| 2007 | 12.7[p] | 9.1 | 11.4 | 9.8 | 10.8 | 11.1 | 11.7 | 11.7 | 11.1 | 12.8 | 8.3 | 9.8 | 9.7 |
| **Death rate (per 1,000 population per annum)** | | | | | | | | | | | | | |
| 1971–75 | 11.8 | 12.6 | 12.1 | 9.8 | 9.9 | 12.4 | 10.1 | 11.1 | 9.5 | 10.7 | 12.3 | 8.6 | 11.9 |
| 1976–80 | 11.9 | 12.3 | 11.6 | 12.9 | 10.4 | 12.5 | 10.5 | 12.1 | 9.3 | 10.2 | 12.2 | 8.8 | 12.9 |
| 1981–85 | 11.7 | 12.0 | 11.4 | 11.3 | 10.0 | 12.8 | 11.1 | 12.3 | 9.3 | 10.1 | 12.0 | 9.0 | 13.7 |
| 1986–90 | 11.4 | 11.1 | 10.8 | 11.9 | 10.2 | 12.4 | 11.5 | 11.9 | 9.8 | 9.5 | 11.6 | 9.3 | 13.5 |
| 1991–95 | 11.1 | 10.4 | 10.4 | 12.9 | 9.0 | 11.6 | 11.9 | 13.9 | 9.8 | 9.1 | 10.8 | 9.5 | 14.3 |
| 1996–00 | 10.6 | 9.7 | 10.3 | 14.0 | 7.7 | 10.8 | 11.2 | 13.1 | 9.6 | 9.2 | 10.4 | 9.7 | 13.9 |
| 2001 | 10.2 | 9.3 | 10.1 | 14.2 | 6.9 | 10.5 | 10.9 | 13.6 | 9.4 | 8.9 | 10.1 | 9.4 | 13.0 |
| 2002 | 10.2 | 9.4 | 10.2 | 14.3 | 7.3 | 10.6 | 10.9 | 13.5 | 9.5 | 9.2 | 10.2 | 9.5 | 13.1 |
| 2003 | 10.3 | 9.5 | 10.4 | 14.3 | 7.2 | 10.9 | 10.7 | 13.4 | 9.4 | 9.2 | 10.3 | 9.6 | 13.4 |
| 2004 | 9.7 | 9.1 | 9.8 | 14.2 | 7.1 | 10.5 | 10.3 | 13.2 | 9.1 | 8.4 | 10.0 | 9.5 | 13.1 |
| 2005 | 9.7 | 9.1 | 9.8 | 14.6 | 7.2 | 10.6 | 10.2 | 12.9 | 9.1 | 8.6 | 10.1 | 9.5 | 13.5 |
| 2006 | 9.4 | 8.9 | .. | 14.8 | 6.7 | 10.2 | 10.2 | 12.9 | 9.1 | .. | 9.9 | 9.5 | 13.1 |
| 2007 | 9.4[p] | 8.9 | .. | .. | .. | .. | 10.2 | .. | 9.2 | .. | 10.0 | .. | 13.0 |

Note:
Estimated population (mid-year), live birth and death rates up to the latest available data, as given in the *United Nations Monthly Bulletin of Statistics* (June 2008), *the United Nations Demographic Yearbook* (May 2008), and the Eurostat website (June 2008).

1 Republic of Cyprus - Greek Cypriot controlled area only
2 Including former GDR throughout.
3 Greece - mid-year population excludes armed forces stationed outside the country but includes alien forces stationed in the area.
4 Malta - including work and resident permit holders and foreigners residing in Malta.
5 Poland - excluding civilian aliens within the country but including civilian nationals temporarily outside the country. Average year data for 2000 and 2001 contain revised data according to the final results of the population census 2002.
6 Portugal - including the Azores and Madeira islands.
7 Spain - including the Balearic and Canary Islands.
8 For 1971 the European Union consisted of the 6 original member countries. This has since been expanded to include: 9 countries (1976–EU15); 10 countries (2004–EU25); 2 countries (2007–EU27). In this table, all totals include the EU27.
9 Including the Indian held part of Jammu and Kashmir, the final status of which has not yet been determined.
10 Japan - excluding diplomatic personnel outside the country and foreign military and civilian personnel and their dependants stationed in the area. Rates are based on births to or deaths of Japanese nationals only.
11 USA - excluding armed forces overseas and civilian citizens absent from the country for extended periods.
12 Indicates population estimates of uncertain reliability.
13 Data refer to 15 April.
14 Figures were updated taking into account the results of the 2002 All Russian Population Census.
15 Mid-year estimates have been adjusted for under-enumeration.
16 For statistical purposes the data for China do not include those for the Hong Kong SAR, Macao SAR and Taiwan province of China. Data for the period 1996 to 2000 have been adjusted on the basis of the Population Census of 2000. Data from 2001 to 2004 have been estimated on the basis of the annual national sample surveys of Population Changes. Estimate of uncertain reliability. Death rates for 1999–2003 and birth rates for 2000–2003 were obtained by the Sample Survey of Population Change 2003 in China.
17 Rate is for 1990–1995.
p provisional.

**Table 1.1 continued** Population and vital rates: international

Selected countries

Numbers (thousands)/Rates per thousand

| Year | Irish Republic | Italy | Latvia | Lithuania | Luxem–bourg | Malta[4] | Nether–lands | Poland[5] | Portugal[6] | Romania | Slovakia | Slovenia | Spain[7] | Sweden |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Population (thousands)** | | | | | | | | | | | | | | |
| 1971 | 2,992 | 54,073 | 2,366 | 3,160 | 342 | 330 | 13,194 | 32,800 | 8,644 | 20,470 | 4,540 | 1,732 | 34,216 | 8,098 |
| 1976 | 3,238 | 55,718 | 2,465 | 3,315 | 361 | 330 | 13,774 | 34,360 | 9,356 | 21,450 | 4,764 | 1,809 | 36,118 | 8,222 |
| 1981 | 3,443 | 56,502 | 2,515 | 3,422 | 365 | 322 | 14,247 | 35,902 | 9,851 | 22,353 | 4,996 | 1,910 | 37,741 | 8,320 |
| 1986 | 3,543 | 56,596 | 2,588 | 3,560 | 368 | 344 | 14,572 | 37,456 | 10,011 | 22,823 | 5,179 | 1,975 | 38,536 | 8,370 |
| 1991 | 3,526 | 56,751 | 2,662 | 3,742 | 387 | 358 | 15,070 | 38,245 | 9,871 | 23,185 | 5,283 | 2,002 | 38,920 | 8,617 |
| 1996 | 3,626[13] | 56,860 | 2,457 | 3,602 | 414 | 380 | 15,530 | 38,618 | 10,058 | 22,608 | 5,374 | 1,991 | 39,479 | 8,841 |
| 2001 | 3,839[13] | 56,978 | 2,355 | 3,481 | 442 | 393 | 16,046 | 38,251 | 10,293 | 22,408 | 5,380 | 1,992 | 40,721 | 8,896 |
| 2002 | 3,917[13] | 57,157 | 2,339 | 3,469 | 446 | 396 | 16,149 | 38,232 | 10,368 | 21,795 | 5,379 | 1,996 | 41,314 | 8,925 |
| 2003 | 3,996[13] | 57,605 | 2,325 | 3,454 | 450 | 399 | 16,225 | 38,195 | 10,441 | 21,734 | 5,379 | 1,997 | 42,005 | 8,958 |
| 2004 | 4,044[13] | 58,175 | 2,313 | 3,436 | 453 | 401 | 16,282 | 38,180 | 10,502 | 21,673 | 5,382 | 1,997 | 42,692 | 8,994 |
| 2005 | 4,131[13] | 58,607 | 2,301 | 3,414 | 457 | 404 | 16,320 | 38,161 | 10,549 | 21,624 | 5,387 | 2,001 | 43,398 | 9,030 |
| 2006 | 4,230[13] | 58,940 | 2,295 | 3,390[P] | 470[P] | 410[P] | 16,350[P] | 38,130 | 10,580 | 21,580[P] | 5,400[P] | 2,010 | 44,100 | 9,090[P] |
| 2007 | 4,340[P] | 59,420[P] | 2,270[P] | 3,370[P] | .. | 410[P] | 16,370[P] | .. | .. | 21,540[P] | 5,390[P] | 2,020[P] | 44,850[P] | 9,140[P] |
| **Population changes (per 1,000 per annum)** | | | | | | | | | | | | | | |
| 1971–76 | 16.4 | 6.1 | 8.4 | 9.8 | 10.7 | 0.0 | 8.8 | 9.5 | 16.5 | 9.6 | 9.9 | 8.9 | 11.1 | 3.1 |
| 1976–81 | 12.7 | 2.8 | 4.1 | 6.5 | 2.5 | –4.8 | 6.9 | 9.0 | 10.6 | 8.4 | 9.7 | 11.2 | 9.0 | 2.4 |
| 1981–86 | 5.8 | 0.3 | 5.8 | 8.1 | 1.8 | 13.7 | 4.6 | 8.7 | 3.2 | 4.2 | 7.3 | 6.8 | 4.2 | 1.2 |
| 1986–91 | –1.0 | 0.5 | 5.7 | 10.2 | 10.2 | 8.1 | 6.8 | 4.2 | –2.8 | 3.2 | 4.0 | 2.7 | 2.0 | 5.9 |
| 1991–96 | 4.3 | 0.4 | –12.8 | –1.7 | 13.9 | 8.4 | 6.1 | 2.0 | 3.8 | –5.0 | 3.4 | –1.1 | 2.9 | 5.1 |
| 1996–01 | 11.7 | 0.4 | –8.3 | –6.7 | 13.5 | 6.8 | 6.6 | –1.9 | 4.7 | –1.8 | 0.2 | 0.1 | 6.3 | 1.2 |
| 2001–02 | 20.3 | 3.1 | –6.8 | –3.4 | 9.0 | 7.6 | 6.4 | –0.5 | 7.3 | –27.4 | –0.2 | 2.0 | 14.6 | 3.3 |
| 2002–03 | 20.2 | 7.8 | –6.0 | –4.3 | 9.0 | 7.6 | 4.7 | –1.0 | 7.0 | –2.8 | 0.0 | 0.5 | 16.7 | 3.7 |
| 2003–04 | 12.0 | 9.9 | –5.2 | –5.2 | 6.7 | 5.0 | 3.5 | –0.4 | 5.8 | –2.8 | 0.6 | 0.0 | 16.4 | 4.0 |
| 2004–05 | 21.5 | 7.4 | –5.2 | –6.4 | 8.8 | 7.5 | 2.3 | –0.5 | 4.5 | –2.3 | 0.9 | 2.0 | 16.5 | 4.0 |
| 2005–06 | 24.0 | 5.7 | –2.6 | –7.0[P] | 28.4[P] | 14.9[P] | 1.8[P] | –0.8 | 2.9 | –2.0[P] | 2.4[P] | 4.5 | 16.2 | 6.6[P] |
| 2006–07 | 26.0[P] | 8.1[P] | –10.9[P] | –5.9[P] | .. | 0.0[P] | 1.2[P] | .. | .. | –1.9[P] | –1.9[P] | 5.0[P] | 17.0[P] | 5.5[P] |
| **Live birth rate (per 1,000 population per annum)** | | | | | | | | | | | | | | |
| 1971–75 | 22.2 | 16.0 | 14.4 | 16.4 | 11.6 | 17.5 | 14.9 | 17.9 | 20.3 | 19.3 | 19.7 | 16.4 | 19.2 | 13.5 |
| 1976–80 | 21.3 | 12.6 | 13.9 | 15.4 | 11.2 | 17.0 | 12.6 | 19.3 | 17.9 | 18.9 | 20.3 | 16.3 | 17.1 | 11.6 |
| 1981–85 | 19.2 | 10.6 | 15.2 | 16.0 | 11.6 | 15.3 | 12.2 | 19.0 | 14.5 | 15.6 | 18.0 | 14.2 | 12.8 | 11.3 |
| 1986–90 | 15.8 | 9.8 | 15.3 | 15.8 | 12.2 | 16.0 | 12.8 | 15.5 | 11.9 | 15.8 | 15.8 | 12.3 | 10.8 | 13.2 |
| 1991–95 | 14.0 | 9.6 | 10.8 | 13.1 | 13.3 | 14.0 | 12.8 | 12.9 | 11.4 | 11.1 | 13.3 | 10.0 | 9.8 | 13.3 |
| 1996–00 | 14.2 | 9.2 | 8.0 | 10.4 | 13.1 | 12.0 | 12.6 | 10.4 | 11.3 | 10.4 | 10.7 | 9.1 | 9.5 | 10.2 |
| 2001 | 15.1 | 9.2 | 8.3 | 9.1 | 12.4 | 10.0 | 12.6 | 9.6 | 11.0 | 9.8 | 9.5 | 8.8 | 10.0 | 10.3 |
| 2002 | 15.5 | 9.4 | 8.6 | 8.7 | 12.0 | 9.6 | 12.5 | 9.3 | 11.0 | 9.7 | 9.5 | 8.8 | 10.2 | 10.7 |
| 2003 | 15.4 | 9.4 | 9.0 | 8.9 | 11.8 | 10.1 | 12.3 | 9.2 | 10.8 | 9.8 | 9.6 | 8.7 | 10.5 | 11.1 |
| 2004 | 15.3 | 9.7 | 8.8 | 8.9 | 11.8 | 9.7 | 11.9 | 9.3 | 10.4 | 10.0 | 10.0 | 9.0 | 10.6 | 11.2 |
| 2005 | 14.8 | 9.5 | 9.4 | 9.0 | 11.8 | 9.6 | 11.5 | 9.6 | 10.4 | 10.2 | 9.3 | 9.1 | 10.7 | 11.2 |
| 2006 | 15.2 | 9.5 | 9.7 | 9.2 | 11.7 | 9.6 | 11.3 | 9.8 | 10.0 | 10.1 | 10.0 | 9.4 | 10.9 | 11.7 |
| 2007 | 16.2 | 9.5 | 10.1 | 9.5 | 11.4 | 9.5 | 11.0 | 10.2 | 10.0 | 9.9 | 10.1 | 9.7 | 10.8 | 11.7 |
| **Death rate (per 1,000 population per annum)** | | | | | | | | | | | | | | |
| 1971–75 | 11.0 | 9.8 | 11.6 | 9.0 | 12.2 | 9.0 | 8.3 | 8.4 | 11.0 | 9.4 | 9.4 | 10.0 | 8.5 | 10.5 |
| 1976–80 | 10.2 | 9.7 | 12.6 | 10.1 | 11.5 | 9.0 | 8.1 | 9.2 | 10.1 | 9.8 | 9.8 | 9.8 | 8.0 | 10.9 |
| 1981–85 | 9.4 | 9.5 | 12.8 | 10.6 | 11.2 | 8.2 | 8.3 | 9.6 | 9.6 | 10.3 | 10.1 | 10.3 | 7.7 | 11.0 |
| 1986–90 | 9.1 | 9.4 | 12.4 | 10.3 | 10.5 | 7.4 | 8.5 | 10.0 | 9.6 | 10.8 | 10.1 | 9.6 | 8.2 | 11.1 |
| 1991–95 | 8.8 | 9.7 | 14.8 | 12.0 | 9.8 | 7.6 | 8.8 | 10.2 | 10.4 | 11.5 | 9.9 | 9.7 | 8.7 | 10.9 |
| 1996–00 | 8.5 | 9.8 | 13.9 | 11.5 | 9.0 | 7.7 | 8.8 | 9.8 | 10.5 | 12.0 | 9.7 | 9.5 | 9.1 | 10.6 |
| 2001 | 7.9 | 9.6 | 14.0 | 11.6 | 8.4 | 7.6 | 8.7 | 9.5 | 10.2 | 11.6 | 9.7 | 9.3 | 8.9 | 10.5 |
| 2002 | 7.5 | 9.8 | 13.9 | 11.8 | 8.4 | 7.8 | 8.8 | 9.4 | 10.2 | 12.4 | 9.6 | 9.4 | 8.9 | 10.6 |
| 2003 | 7.2 | 10.2 | 13.9 | 11.9 | 9.0 | 7.7 | 8.7 | 9.6 | 10.4 | 12.3 | 9.7 | 9.7 | 9.2 | 10.4 |
| 2004 | 7.0 | 9.4 | 13.9 | 12.0 | 7.6 | 7.2 | 8.4 | 9.5 | 9.7 | 11.9 | 9.6 | 9.3 | 8.7 | 10.1 |
| 2005 | 6.6 | 9.7 | 14.2 | 12.8 | 8.0 | 7.8 | 8.4 | 9.7 | 10.2 | 12.1 | 9.9 | 9.4 | 8.9 | 10.2 |
| 2006 | 6.5 | 9.5 | 14.5 | 13.2 | 8.0 | .. | 8.3 | 9.7 | 9.7 | 11.9 | 9.9 | 9.1 | 8.4 | 10.0 |
| 2007 | .. | .. | 14.5 | 13.5 | .. | .. | .. | .. | .. | 11.7 | 9.9 | .. | .. | 10.0 |

See notes on first page of table.

**Table 1.1 continued** **Population and vital rates: international**

Selected countries

Numbers (thousands)/Rates per thousand

| Year | EU[8] | Russian Federation | Australia | Canada | New Zealand | China | India[9] | Japan[10] | USA[11] | Year |
|---|---|---|---|---|---|---|---|---|---|---|
| **Population (thousands)** | | | | | | | | | | |
| 1971 | 438,728 | 130,934 | 13,067 | 22,026 | 2,899 | 852,290[16] | 551,311 | 105,145 | 207,661 | 1971 |
| 1976 | 450,468 | 135,027 | 14,033 | 23,517 | 3,163 | 937,170[16] | 617,248 | 113,094 | 218,035 | 1976 |
| 1981 | 459,807 | 139,225 | 14,923 | 24,900 | 3,195 | 1,008,460[16] | 675,185 | 117,902 | 229,958 | 1981 |
| 1986 | 465,336 | 144,154 | 16,018 | 26,204 | 3,317 | 1,086,733[16] | 767,199 | 121,672 | 240,680 | 1986 |
| 1991 | 473,094 | 148,245 | 17,284 | 28,031 | 3,477 | 1,170,100[16] | 851,897 | 123,964 | 252,639 | 1991 |
| 1996 | 478,084 | 148,160[14] | 18,311[15] | 29,611[15] | 3,732 | 1,217,550[16] | 942,157[12] | 125,757 | 269,394 | 1996 |
| 2001 | 482,464 | 145,976[14] | 19,413[15] | 31,021[15] | 3,880 | 1,271,850[16] | 1,035,066[12] | 127,130 | 285,108 | 2001 |
| 2002 | 483,643 | 145,306[14] | 19,641[15] | 31,373[15] | 3,939 | 1,280,400[16] | 1,050,640[12] | 127,400 | 287,985 | 2002 |
| 2003 | 485,617 | 144,566[14] | 19,873[15] | 31,669[15] | 4,009 | 1,288,400[16] | 1,068,214[12] | 127,650 | 290,850 | 2003 |
| 2004 | 487,720 | 143,821[14] | 20,111[15] | 31,974[15] | 4,061 | 1,296,075[16] | 1,085,600[12] | 127,670 | 293,623 | 2004 |
| 2005 | 490,125 | 143,150[14] | 20,409[15] | 32,312[15] | 4,099 | 1,303,720[16] | 1,101,000[12] | 127,773 | 296,410 | 2005 |
| 2006 | 492,068[P] | 142,490[14] | 20,700[15] | 32,650[15] | 4,180 | 1,311,020[16] | 1,117,730[12] | 127,760 | 299,400 | 2006 |
| 2007 | .. | .. | 21,020[15,P] | 32,980[15,P] | 4,230[P] | .. | 1,134,000[12] | 127,770 | .. | 2007 |
| **Population changes (per 1,000 per annum)** | | | | | | | | | | |
| 1971–76 | 5.4 | 6.3 | 14.8 | 13.5 | 18.2 | 19.9 | 23.9 | 15.1 | 10.0 | 1971–76 |
| 1976–81 | 4.1 | 6.2 | 12.7 | 11.8 | 2.0 | 15.2 | 18.8 | 8.5 | 10.9 | 1976–81 |
| 1981–86 | 2.4 | 7.1 | 14.7 | 10.5 | 7.6 | 15.5 | 27.3 | 6.4 | 9.3 | 1981–86 |
| 1986–91 | 3.3 | 5.7 | 15.8 | 13.9 | 9.6 | 15.3 | 22.1 | 3.8 | 9.9 | 1986–91 |
| 1991–96 | 2.1 | –1.7 | 11.9 | 11.3 | 14.7 | 10.3 | 21.1 | 2.9 | 12.1 | 1991–96 |
| 1996–01 | 1.8 | –2.9 | 12.0 | 9.5 | 7.9 | 8.9 | 19.7 | 2.2 | 11.7 | 1996–01 |
| 2001–02 | 2.4 | –4.6 | 11.7 | 11.3 | 15.2 | 6.7 | 15.0 | 2.1 | 10.1 | 2001–02 |
| 2002–03 | 4.1 | –5.1 | 11.8 | 9.4 | 17.8 | 6.2 | 16.7 | 2.0 | 9.9 | 2002–03 |
| 2003–04 | 4.3 | –5.2 | 12.0 | 9.6 | 13.0 | 6.0 | 16.3 | 0.2 | 9.5 | 2003–04 |
| 2004–05 | 4.9 | –4.7 | 14.8 | 10.6 | 9.4 | 5.9 | 14.2 | 0.8 | 9.5 | 2004–05 |
| 2005–06 | 3.8[P] | –4.6 | 14.3 | 10.5 | 19.8 | 5.6 | 15.2 | –0.1 | 10.1 | 2005–06 |
| 2006–07 | .. | .. | 15.5[P] | 10.1[P] | 12.0[P] | .. | 14.6 | 0.1 | .. | 2006–07 |
| **Live birth rate (per 1,000 population per annum)** | | | | | | | | | | |
| 1971–75 | .. | .. | 18.8 | 15.9 | 20.4 | 27.2 | 35.6 | 18.6 | 15.3 | 1971–75 |
| 1976–80 | .. | .. | 15.7 | 15.5 | 16.8 | 18.6 | 33.4 | 14.9 | 15.2 | 1976–80 |
| 1981–85 | .. | .. | 15.6 | 15.1 | 15.8 | 19.2 | .. | 12.6 | 15.7 | 1981–85 |
| 1986–90 | .. | .. | 15.1 | 14.8 | 17.1 | .. | .. | 10.6 | 16.0 | 1986–90 |
| 1991–95 | 11.4 | 10.2 | 14.7 | 13.6 | 16.9 | 18.5[17] | .. | 9.7 | 13.1 | 1991–95 |
| 1996–00 | 10.6 | 8.6 | 13.4 | 11.4 | 14.9 | .. | .. | 9.5 | 14.3 | 1996–00 |
| 2001 | 10.1 | 9.0 | 12.7 | 10.8 | 14.4 | 13.4[16] | 25.4 | 9.2 | 14.1 | 2001 |
| 2002 | 10.3 | 9.6 | 12.8 | 10.5 | 13.7 | 12.9[16] | 25.0 | 9.1 | 14.0 | 2002 |
| 2003 | 10.3 | 10.2 | 12.6 | 10.6 | 14.0 | 12.4[16] | 24.8 | 8.8 | 14.1 | 2003 |
| 2004 | 10.4 | 10.5 | 12.7 | 10.5 | 14.3 | 12.3[16] | 24.1 | 8.7 | 14.0 | 2004 |
| 2005 | 10.4 | 10.2 | 12.9 | 10.6 | 14.1 | 12.4[16] | 23.8 | 8.3 | 14.0 | 2005 |
| 2006 | 10.6 | 10.4 | 12.9 | .. | 14.1 | .. | .. | 8.6 | .. | 2006 |
| 2007 | 10.6 | 10.9 | .. | .. | 15.2 | .. | .. | .. | .. | 2007 |
| **Death rate (per 1,000 population per annum)** | | | | | | | | | | |
| 1971–75 | .. | .. | 8.2 | 7.4 | 8.4 | 7.3 | 15.5 | 6.4 | 9.1 | 1971–75 |
| 1976–80 | .. | .. | 7.6 | 7.2 | 8.2 | 6.6 | 13.8 | 6.1 | 8.7 | 1976–80 |
| 1981–85 | .. | .. | 7.3 | 7.0 | 8.1 | 6.7 | .. | 6.1 | 8.6 | 1981–85 |
| 1986–90 | .. | .. | 7.2 | 7.3 | 8.2 | .. | .. | 6.4 | 8.7 | 1986–90 |
| 1991–95 | 10.4 | 13.7 | 7.0 | 7.8 | 7.8 | .. | .. | 7.0 | 8.7 | 1991–95 |
| 1996–00 | 10.2 | 14.3 | 6.9 | 7.2 | 7.2 | .. | .. | 7.4 | 8.5 | 1996–00 |
| 2001 | 9.9 | 15.4 | 6.6 | 7.1 | 7.2 | 6.4[16] | 8.4 | 7.6 | 8.5 | 2001 |
| 2002 | 9.9 | 16.1 | 6.8 | 7.1 | 7.1 | 6.4[16] | 8.1 | 7.7 | 8.5 | 2002 |
| 2003 | 10.1 | 16.4 | 6.7 | 7.1 | 7.0 | 6.4[16] | 8.0 | 8.0 | 8.4 | 2003 |
| 2004 | 9.7 | 16.0 | 6.6 | 7.1 | 7.0 | 6.4[16] | 7.5 | 8.1 | 8.2 | 2004 |
| 2005 | 9.8 | 15.2 | 6.4 | 7.2 | 6.6 | 6.5[16] | 7.6 | 8.5 | .. | 2005 |
| 2006 | .. | 15.0 | 6.5 | .. | 6.7 | .. | .. | 8.5 | .. | 2006 |
| 2007 | .. | .. | .. | .. | 6.8 | .. | .. | .. | .. | 2007 |

See notes on first page of table.

## Table 1.2 Population: national

Constituent countries of the United Kingdom

Numbers (thousands) and percentage age distribution

| Mid-year | United Kingdom | Great Britain | England and Wales | England | Wales | Scotland | Northern Ireland |
|---|---|---|---|---|---|---|---|
| **Estimates** | | | | | | | |
| 1971 | 55,928 | 54,388 | 49,152 | 46,412 | 2,740 | 5,236 | 1,540 |
| 1976 | 56,216 | 54,693 | 49,459 | 46,660 | 2,799 | 5,233 | 1,524 |
| 1981 | 56,357 | 54,815 | 49,634 | 46,821 | 2,813 | 5,180 | 1,543 |
| 1986 | 56,684 | 55,110 | 49,999 | 47,188 | 2,811 | 5,112 | 1,574 |
| 1991 | 57,439 | 55,831 | 50,748 | 47,875 | 2,873 | 5,083 | 1,607 |
| 1993 | 57,714 | 56,078 | 50,986 | 48,102 | 2,884 | 5,092 | 1,636 |
| 1994 | 57,862 | 56,218 | 51,116 | 48,229 | 2,887 | 5,102 | 1,644 |
| 1995 | 58,025 | 56,376 | 51,272 | 48,383 | 2,889 | 5,104 | 1,649 |
| 1996 | 58,164 | 56,503 | 51,410 | 48,519 | 2,891 | 5,092 | 1,662 |
| 1997 | 58,314 | 56,643 | 51,560 | 48,665 | 2,895 | 5,083 | 1,671 |
| 1998 | 58,475 | 56,797 | 51,720 | 48,821 | 2,900 | 5,077 | 1,678 |
| 1999 | 58,684 | 57,005 | 51,933 | 49,033 | 2,901 | 5,072 | 1,679 |
| 2000 | 58,886 | 57,203 | 52,140 | 49,233 | 2,907 | 5,063 | 1,683 |
| 2001 | 59,113 | 57,424 | 52,360 | 49,450 | 2,910 | 5,064 | 1,689 |
| 2002 | 59,323 | 57,627 | 52,572 | 49,652 | 2,920 | 5,055 | 1,697 |
| 2003 | 59,557 | 57,855 | 52,797 | 49,866 | 2,931 | 5,057 | 1,703 |
| 2004 | 59,846 | 58,136 | 53,057 | 50,111 | 2,946 | 5,078 | 1,710 |
| 2005 | 60,238 | 58,514 | 53,419 | 50,466 | 2,954 | 5,095 | 1,724 |
| 2006 | 60,587 | 58,846 | 53,729 | 50,763 | 2,966 | 5,117 | 1,742 |
| 2007 | 60,975 | 59,216 | 54,072 | 51,092 | 2,980 | 5,144 | 1,759 |
| *2007 by age group* **(percentages)** | | | | | | | |
| 0–4 | *5.9* | *5.9* | *5.9* | *5.9* | *5.5* | *5.3* | *6.6* |
| 5–15 | *13.0* | *12.9* | *13.0* | *13.0* | *13.2* | *12.5* | *15.1* |
| 16–44 | *40.1* | *40.1* | *40.2* | *40.3* | *37.4* | *39.3* | *41.2* |
| 45–64M/59F | *22.0* | *22.1* | *21.9* | *21.9* | *22.9* | *23.4* | *20.7* |
| 65M/60F–74 | *11.2* | *11.3* | *11.2* | *11.1* | *12.5* | *11.9* | *10.1* |
| 75 and over | *7.7* | *7.8* | *7.8* | *7.8* | *8.5* | *7.5* | *6.3* |
| **Projections**[1] | | | | | | | |
| 2006 | 60,587 | 58,846 | 53,729 | 50,763 | 2,966 | 5,117 | 1,742 |
| 2011 | 62,761 | 60,950 | 55,744 | 52,706 | 3,038 | 5,206 | 1,812 |
| 2016 | 64,975 | 63,107 | 57,837 | 54,724 | 3,113 | 5,270 | 1,868 |
| 2021 | 67,191 | 65,269 | 59,943 | 56,757 | 3,186 | 5,326 | 1,922 |
| 2026 | 69,260 | 67,294 | 61,931 | 58,682 | 3,248 | 5,363 | 1,966 |
| 2031 | 71,100 | 69,101 | 63,727 | 60,432 | 3,296 | 5,374 | 1,999 |
| *2031 by age group* **(percentages)** | | | | | | | |
| 0–4 | *5.5* | *5.5* | *5.6* | *5.6* | *5.1* | *4.7* | *5.7* |
| 5–15 | *12.4* | *12.4* | *12.5* | *12.5* | *12.1* | *11.2* | *13.4* |
| 16–44 | *36.4* | *36.4* | *36.6* | *36.8* | *33.7* | *34.3* | *35.5* |
| 45–64[2] | *23.4* | *23.4* | *23.3* | *23.3* | *23.5* | *24.4* | *23.9* |
| 65–74[2] | *10.6* | *10.6* | *10.5* | *10.4* | *12.0* | *12.4* | *10.7* |
| 75 and over | *11.6* | *11.6* | *11.5* | *11.4* | *13.7* | *12.9* | *10.9* |

Note: Figures may not add exactly due to rounding.

1 National projections based on mid-2006 population estimates.

2 Between 2010 and 2020, state pension age will change from 65 years for men and 60 years for women to 65 years for both sexes. Between 2024 and 2026, state pension age will increase from 65 years to 66 years for both men and women.

## Table 1.3 Population: subnational

Government Office Regions of England

Numbers (thousands) and percentage age distribution

| Mid-year | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|
| **Estimates** | | | | | | | | | |
| 1971 | 2,679 | 7,108 | 4,902 | 3,652 | 5,146 | 4,454 | 7,529 | 6,830 | 4,112 |
| 1976 | 2,671 | 7,043 | 4,924 | 3,774 | 5,178 | 4,672 | 7,089 | 7,029 | 4,280 |
| 1981 | 2,636 | 6,940 | 4,918 | 3,853 | 5,187 | 4,854 | 6,806 | 7,245 | 4,381 |
| 1986 | 2,594 | 6,833 | 4,884 | 3,908 | 5,180 | 4,999 | 6,774 | 7,468 | 4,548 |
| 1991 | 2,587 | 6,843 | 4,936 | 4,011 | 5,230 | 5,121 | 6,829 | 7,629 | 4,688 |
| 1993 | 2,594 | 6,847 | 4,954 | 4,056 | 5,246 | 5,154 | 6,844 | 7,673 | 4,734 |
| 1994 | 2,589 | 6,839 | 4,960 | 4,072 | 5,249 | 5,178 | 6,874 | 7,712 | 4,757 |
| 1995 | 2,583 | 6,828 | 4,961 | 4,092 | 5,257 | 5,206 | 6,913 | 7,763 | 4,782 |
| 1996 | 2,576 | 6,810 | 4,961 | 4,108 | 5,263 | 5,233 | 6,974 | 7,800 | 4,793 |
| 1997 | 2,568 | 6,794 | 4,958 | 4,120 | 5,262 | 5,267 | 7,015 | 7,853 | 4,827 |
| 1998 | 2,561 | 6,792 | 4,958 | 4,133 | 5,271 | 5,302 | 7,065 | 7,889 | 4,849 |
| 1999 | 2,550 | 6,773 | 4,956 | 4,152 | 5,272 | 5,339 | 7,154 | 7,955 | 4,881 |
| 2000 | 2,543 | 6,774 | 4,959 | 4,168 | 5,270 | 5,375 | 7,237 | 7,991 | 4,917 |
| 2001 | 2,540 | 6,773 | 4,977 | 4,190 | 5,281 | 5,400 | 7,322 | 8,023 | 4,943 |
| 2002 | 2,541 | 6,778 | 5,002 | 4,222 | 5,295 | 5,433 | 7,362 | 8,047 | 4,973 |
| 2003 | 2,541 | 6,800 | 5,028 | 4,254 | 5,312 | 5,475 | 7,364 | 8,087 | 5,005 |
| 2004 | 2,542 | 6,820 | 5,064 | 4,291 | 5,327 | 5,511 | 7,389 | 8,125 | 5,042 |
| 2005 | 2,550 | 6,840 | 5,108 | 4,328 | 5,351 | 5,563 | 7,456 | 8,185 | 5,087 |
| 2006 | 2,556 | 6,853 | 5,142 | 4,364 | 5,367 | 5,607 | 7,512 | 8,238 | 5,124 |
| 2007 | 2,564 | 6,864 | 5,177 | 4,400 | 5,382 | 5,661 | 7,557 | 8,309 | 5,178 |
| *2007 by age group* **(percentages)** | | | | | | | | | |
| 0–4 | *5.5* | *5.9* | *5.8* | *5.6* | *6.1* | *5.9* | *7.0* | *5.8* | *5.2* |
| 5–15 | *12.6* | *13.2* | *13.0* | *12.9* | *13.4* | *13.2* | *12.2* | *13.2* | *12.5* |
| 16–44 | *38.9* | *39.4* | *40.3* | *39.4* | *39.1* | *38.6* | *48.3* | *38.9* | *37.1* |
| 45–64M/59F | *23.2* | *22.3* | *22.0* | *22.7* | *22.0* | *22.4* | *18.6* | *22.5* | *22.9* |
| 65M/60F–74 | *11.9* | *11.5* | *11.3* | *11.6* | *11.6* | *11.7* | *8.1* | *11.3* | *12.6* |
| 75 and over | *8.0* | *7.7* | *7.6* | *7.8* | *7.9* | *8.2* | *5.7* | *8.3* | *9.5* |
| **Projections**[1] | | | | | | | | | |
| 2006 | 2,556 | 6,853 | 5,142 | 4,364 | 5,367 | 5,607 | 7,512 | 8,238 | 5,124 |
| 2011 | 2,594 | 7,014 | 5,377 | 4,591 | 5,506 | 5,890 | 7,817 | 8,550 | 5,368 |
| 2016 | 2,638 | 7,193 | 5,621 | 4,825 | 5,662 | 6,179 | 8,114 | 8,871 | 5,620 |
| 2021 | 2,685 | 7,377 | 5,866 | 5,060 | 5,824 | 6,471 | 8,390 | 9,202 | 5,882 |
| 2026 | 2,730 | 7,546 | 6,101 | 5,286 | 5,977 | 6,747 | 8,633 | 9,523 | 6,139 |
| 2029 | 2,754 | 7,638 | 6,234 | 5,412 | 6,061 | 6,901 | 8,768 | 9,702 | 6,283 |
| 2031 | 2,769 | 7,696 | 6,319 | 5,491 | 6,114 | 6,997 | 8,858 | 9,814 | 6,374 |
| *2031 by age group* **(percentages)** | | | | | | | | | |
| 0–4 | *5.2* | *5.5* | *5.6* | *5.3* | *5.9* | *5.5* | *6.7* | *5.5* | *5.0* |
| 5–15 | *12.1* | *12.6* | *12.5* | *12.3* | *13.2* | *12.6* | *12.6* | *12.7* | *11.8* |
| 16–44 | *35.6* | *36.3* | *37.7* | *35.6* | *35.7* | *34.9* | *43.7* | *35.1* | *33.9* |
| 45–64[2] | *23.0* | *23.2* | *23.0* | *23.8* | *22.8* | *23.7* | *22.9* | *23.6* | *23.7* |
| 65–74[2] | *11.7* | *10.9* | *10.2* | *11.0* | *10.5* | *10.9* | *7.4* | *10.8* | *11.8* |
| 75 and over | *12.4* | *11.5* | *10.9* | *12.0* | *11.9* | *12.4* | *6.7* | *12.4* | *13.9* |

Note: Figures may not add exactly due to rounding.

1 These projections are based on the 2006 population estimates and are consistent with the 2006-based national projections produced by the Office for National Statistics.

2 Between 2010 and 2020, state pension age will change from 65 years for men and 60 years for women to 65 years for both sexes.
Between 2024 and 2026, state pension age will increase from 65 years to 66 years for both men and women.

## Table 1.4 Population: age and sex

Constituent countries of the United Kingdom

Numbers (thousands)

| Mid-year | All ages | Age group | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Under 1 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–59 | 60–64 | 65–74 | 75–84 | 85–89 | 90 and over | Under 16 | 16–64M/59F[1] | 65M/60F[1] and over |
| **United Kingdom** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 56,357 | 730 | 2,726 | 8,147 | 9,019 | 8,010 | 6,774 | 9,540 | 2,935 | 5,195 | 2,677 | .. | .. | 12,543 | 33,780 | 10,035 |
| 1986 | 56,684 | 748 | 2,886 | 7,143 | 9,200 | 8,007 | 7,711 | 9,212 | 3,069 | 5,020 | 2,971 | 716 | .. | 11,645 | 34,725 | 10,313 |
| 1991 | 57,439 | 790 | 3,077 | 7,141 | 8,168 | 8,898 | 7,918 | 9,500 | 2,888 | 5,067 | 3,119 | 626 | 248 | 11,685 | 35,197 | 10,557 |
| 1996 | 58,164 | 719 | 3,019 | 7,544 | 7,231 | 9,131 | 7,958 | 10,553 | 2,785 | 5,066 | 3,129 | 711 | 317 | 12,018 | 35,498 | 10,649 |
| 2000 | 58,886 | 682 | 2,869 | 7,652 | 7,139 | 8,646 | 8,678 | 11,011 | 2,900 | 4,940 | 3,249 | 755 | 364 | 11,959 | 36,138 | 10,788 |
| 2001 | 59,113 | 663 | 2,819 | 7,624 | 7,261 | 8,475 | 8,846 | 11,168 | 2,884 | 4,947 | 3,296 | 753 | 377 | 11,863 | 36,406 | 10,845 |
| 2002 | 59,323 | 661 | 2,753 | 7,603 | 7,400 | 8,264 | 9,004 | 11,307 | 2,892 | 4,967 | 3,344 | 738 | 388 | 11,785 | 36,622 | 10,916 |
| 2003 | 59,557 | 680 | 2,706 | 7,546 | 7,573 | 8,084 | 9,105 | 11,412 | 2,949 | 5,001 | 3,398 | 706 | 399 | 11,720 | 36,826 | 11,012 |
| 2004 | 59,846 | 705 | 2,686 | 7,475 | 7,739 | 7,954 | 9,185 | 11,507 | 3,027 | 5,028 | 3,431 | 702 | 409 | 11,645 | 37,083 | 11,117 |
| 2005 | 60,238 | 716 | 2,713 | 7,373 | 7,886 | 7,935 | 9,245 | 11,616 | 3,114 | 5,046 | 3,420 | 755 | 419 | 11,589 | 37,418 | 11,232 |
| 2006 | 60,587 | 732 | 2,765 | 7,241 | 8,020 | 7,896 | 9,262 | 11,744 | 3,240 | 5,029 | 3,416 | 820 | 423 | 11,537 | 37,707 | 11,344 |
| 2007 | 60,975 | 756 | 2,837 | 7,128 | 8,156 | 7,859 | 9,248 | 11,728 | 3,483 | 5,058 | 3,424 | 873 | 425 | 11,509 | 37,904 | 11,562 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 27,412 | 374 | 1,400 | 4,184 | 4,596 | 4,035 | 3,409 | 4,711 | 1,376 | 2,264 | 922 | .. | .. | 6,439 | 17,646 | 3,327 |
| 1986 | 27,542 | 384 | 1,478 | 3,664 | 4,663 | 4,022 | 3,864 | 4,572 | 1,463 | 2,206 | 1,060 | 166 | .. | 5,968 | 18,142 | 3,432 |
| 1991 | 27,909 | 403 | 1,572 | 3,655 | 4,146 | 4,432 | 3,949 | 4,732 | 1,390 | 2,272 | 1,146 | 166 | 46 | 5,976 | 18,303 | 3,630 |
| 1996 | 28,287 | 369 | 1,547 | 3,857 | 3,652 | 4,540 | 3,954 | 5,244 | 1,360 | 2,311 | 1,187 | 201 | 65 | 6,148 | 18,375 | 3,764 |
| 2000 | 28,690 | 350 | 1,469 | 3,920 | 3,606 | 4,292 | 4,298 | 5,457 | 1,420 | 2,294 | 1,278 | 225 | 81 | 6,128 | 18,685 | 3,878 |
| 2001 | 28,832 | 338 | 1,445 | 3,906 | 3,672 | 4,215 | 4,382 | 5,534 | 1,412 | 2,308 | 1,308 | 227 | 85 | 6,077 | 18,827 | 3,928 |
| 2002 | 28,964 | 338 | 1,408 | 3,897 | 3,758 | 4,114 | 4,462 | 5,594 | 1,414 | 2,325 | 1,338 | 226 | 89 | 6,037 | 18,949 | 3,978 |
| 2003 | 29,109 | 349 | 1,384 | 3,868 | 3,855 | 4,024 | 4,514 | 5,646 | 1,440 | 2,347 | 1,369 | 219 | 94 | 6,006 | 19,075 | 4,028 |
| 2004 | 29,278 | 362 | 1,376 | 3,832 | 3,953 | 3,960 | 4,546 | 5,691 | 1,479 | 2,365 | 1,392 | 223 | 98 | 5,971 | 19,229 | 4,078 |
| 2005 | 29,497 | 367 | 1,389 | 3,781 | 4,030 | 3,952 | 4,581 | 5,745 | 1,522 | 2,380 | 1,400 | 247 | 103 | 5,941 | 19,426 | 4,130 |
| 2006 | 29,694 | 374 | 1,416 | 3,709 | 4,108 | 3,940 | 4,586 | 5,804 | 1,584 | 2,379 | 1,413 | 273 | 106 | 5,912 | 19,611 | 4,171 |
| 2007 | 29,916 | 387 | 1,453 | 3,649 | 4,193 | 3,936 | 4,578 | 5,786 | 1,701 | 2,398 | 1,432 | 295 | 108 | 5,895 | 19,789 | 4,233 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 28,946 | 356 | 1,327 | 3,963 | 4,423 | 3,975 | 3,365 | 4,829 | 1,559 | 2,931 | 1,756 | .. | .. | 6,104 | 16,134 | 6,708 |
| 1986 | 29,142 | 364 | 1,408 | 3,480 | 4,538 | 3,985 | 3,847 | 4,639 | 1,606 | 2,814 | 1,911 | 550 | .. | 5,678 | 16,583 | 6,881 |
| 1991 | 29,530 | 387 | 1,505 | 3,487 | 4,021 | 4,466 | 3,968 | 4,769 | 1,498 | 2,795 | 1,972 | 460 | 202 | 5,709 | 16,894 | 6,927 |
| 1996 | 29,877 | 350 | 1,472 | 3,687 | 3,579 | 4,591 | 4,005 | 5,309 | 1,426 | 2,755 | 1,942 | 509 | 252 | 5,870 | 17,123 | 6,885 |
| 2000 | 30,196 | 333 | 1,399 | 3,732 | 3,533 | 4,353 | 4,380 | 5,554 | 1,481 | 2,646 | 1,971 | 530 | 283 | 5,832 | 17,453 | 6,911 |
| 2001 | 30,281 | 324 | 1,375 | 3,718 | 3,589 | 4,260 | 4,465 | 5,634 | 1,473 | 2,640 | 1,987 | 526 | 292 | 5,786 | 17,579 | 6,917 |
| 2002 | 30,359 | 323 | 1,346 | 3,706 | 3,642 | 4,150 | 4,542 | 5,713 | 1,478 | 2,642 | 2,006 | 513 | 299 | 5,748 | 17,673 | 6,938 |
| 2003 | 30,449 | 331 | 1,322 | 3,678 | 3,718 | 4,060 | 4,590 | 5,766 | 1,509 | 2,654 | 2,029 | 487 | 305 | 5,714 | 17,751 | 6,984 |
| 2004 | 30,568 | 343 | 1,310 | 3,642 | 3,785 | 3,993 | 4,639 | 5,816 | 1,548 | 2,662 | 2,040 | 479 | 310 | 5,674 | 17,854 | 7,039 |
| 2005 | 30,741 | 349 | 1,324 | 3,592 | 3,856 | 3,983 | 4,663 | 5,871 | 1,591 | 2,666 | 2,020 | 509 | 316 | 5,647 | 17,992 | 7,102 |
| 2006 | 30,893 | 357 | 1,349 | 3,532 | 3,912 | 3,956 | 4,675 | 5,940 | 1,656 | 2,650 | 2,002 | 547 | 317 | 5,625 | 18,096 | 7,172 |
| 2007 | 31,059 | 368 | 1,383 | 3,480 | 3,963 | 3,924 | 4,670 | 5,942 | 1,782 | 2,660 | 1,992 | 578 | 317 | 5,615 | 18,116 | 7,329 |
| **England and Wales** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 49,634 | 634 | 2,372 | 7,085 | 7,873 | 7,086 | 5,996 | 8,433 | 2,607 | 4,619 | 2,388 | 383 | 157 | 10,910 | 29,796 | 8,928 |
| 1986 | 49,999 | 654 | 2,522 | 6,226 | 8,061 | 7,052 | 6,856 | 8,136 | 2,725 | 4,470 | 2,655 | 461 | 182 | 10,161 | 30,647 | 9,190 |
| 1991 | 50,748 | 698 | 2,713 | 6,248 | 7,165 | 7,862 | 7,022 | 8,407 | 2,553 | 4,506 | 2,790 | 561 | 223 | 10,247 | 31,100 | 9,400 |
| 1996 | 51,410 | 637 | 2,668 | 6,636 | 6,336 | 8,076 | 7,017 | 9,363 | 2,457 | 4,496 | 2,801 | 639 | 285 | 10,584 | 31,353 | 9,474 |
| 2000 | 52,140 | 607 | 2,544 | 6,757 | 6,275 | 7,682 | 7,661 | 9,764 | 2,564 | 4,372 | 2,907 | 680 | 328 | 10,572 | 31,977 | 9,591 |
| 2001 | 52,360 | 589 | 2,502 | 6,740 | 6,387 | 7,536 | 7,816 | 9,898 | 2,549 | 4,377 | 2,947 | 677 | 340 | 10,495 | 32,226 | 9,639 |
| 2002 | 52,572 | 589 | 2,445 | 6,728 | 6,518 | 7,357 | 7,964 | 10,018 | 2,555 | 4,394 | 2,989 | 664 | 351 | 10,437 | 32,435 | 9,700 |
| 2003 | 52,797 | 607 | 2,404 | 6,682 | 6,679 | 7,203 | 8,058 | 10,104 | 2,606 | 4,422 | 3,037 | 634 | 360 | 10,388 | 32,626 | 9,783 |
| 2004 | 53,057 | 629 | 2,390 | 6,618 | 6,836 | 7,090 | 8,133 | 10,177 | 2,675 | 4,445 | 3,063 | 632 | 370 | 10,326 | 32,856 | 9,875 |
| 2005 | 53,419 | 639 | 2,415 | 6,528 | 6,974 | 7,078 | 8,194 | 10,264 | 2,757 | 4,461 | 3,052 | 680 | 379 | 10,278 | 33,164 | 9,977 |
| 2006 | 53,729 | 653 | 2,462 | 6,412 | 7,095 | 7,040 | 8,213 | 10,369 | 2,874 | 4,444 | 3,045 | 740 | 382 | 10,235 | 33,417 | 10,077 |
| 2007 | 54,072 | 675 | 2,528 | 6,314 | 7,219 | 6,999 | 8,209 | 10,347 | 3,092 | 4,468 | 3,049 | 787 | 385 | 10,212 | 33,588 | 10,271 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 24,160 | 324 | 1,218 | 3,639 | 4,011 | 3,569 | 3,024 | 4,178 | 1,227 | 2,020 | 825 | 94 | 32 | 5,601 | 15,589 | 2,970 |
| 1986 | 24,311 | 335 | 1,292 | 3,194 | 4,083 | 3,542 | 3,438 | 4,053 | 1,302 | 1,972 | 951 | 115 | 35 | 5,208 | 16,031 | 3,072 |
| 1991 | 24,681 | 356 | 1,385 | 3,198 | 3,638 | 3,920 | 3,504 | 4,199 | 1,234 | 2,027 | 1,029 | 150 | 42 | 5,240 | 16,193 | 3,248 |
| 1996 | 25,030 | 327 | 1,368 | 3,393 | 3,202 | 4,020 | 3,489 | 4,659 | 1,205 | 2,059 | 1,067 | 182 | 59 | 5,416 | 16,247 | 3,367 |
| 2000 | 25,438 | 311 | 1,303 | 3,462 | 3,172 | 3,823 | 3,802 | 4,842 | 1,259 | 2,040 | 1,148 | 204 | 73 | 5,416 | 16,556 | 3,466 |
| 2001 | 25,574 | 301 | 1,281 | 3,453 | 3,231 | 3,758 | 3,881 | 4,907 | 1,252 | 2,052 | 1,175 | 206 | 77 | 5,376 | 16,688 | 3,510 |
| 2002 | 25,704 | 301 | 1,249 | 3,448 | 3,311 | 3,672 | 3,957 | 4,958 | 1,253 | 2,067 | 1,202 | 204 | 81 | 5,346 | 16,804 | 3,554 |
| 2003 | 25,841 | 312 | 1,230 | 3,425 | 3,399 | 3,594 | 4,007 | 5,002 | 1,276 | 2,085 | 1,229 | 198 | 85 | 5,324 | 16,920 | 3,597 |
| 2004 | 25,995 | 323 | 1,225 | 3,394 | 3,493 | 3,538 | 4,036 | 5,037 | 1,310 | 2,100 | 1,248 | 202 | 89 | 5,295 | 17,060 | 3,640 |
| 2005 | 26,197 | 327 | 1,237 | 3,348 | 3,565 | 3,530 | 4,073 | 5,080 | 1,351 | 2,113 | 1,256 | 224 | 94 | 5,270 | 17,241 | 3,685 |
| 2006 | 26,371 | 334 | 1,261 | 3,284 | 3,636 | 3,517 | 4,080 | 5,130 | 1,407 | 2,111 | 1,267 | 248 | 96 | 5,245 | 17,405 | 3,722 |
| 2007 | 26,569 | 346 | 1,295 | 3,231 | 3,715 | 3,508 | 4,076 | 5,110 | 1,511 | 2,127 | 1,283 | 268 | 99 | 5,230 | 17,563 | 3,775 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 25,474 | 310 | 1,154 | 3,446 | 3,863 | 3,517 | 2,972 | 4,255 | 1,380 | 2,599 | 1,564 | 289 | 126 | 5,309 | 14,207 | 5,958 |
| 1986 | 25,687 | 319 | 1,231 | 3,032 | 3,978 | 3,509 | 3,418 | 4,083 | 1,422 | 2,498 | 1,704 | 346 | 148 | 4,953 | 14,616 | 6,118 |
| 1991 | 26,067 | 342 | 1,328 | 3,050 | 3,527 | 3,943 | 3,517 | 4,208 | 1,319 | 2,479 | 1,761 | 411 | 181 | 5,007 | 14,908 | 6,152 |
| 1996 | 26,381 | 310 | 1,300 | 3,243 | 3,134 | 4,056 | 3,528 | 4,704 | 1,252 | 2,437 | 1,734 | 457 | 227 | 5,168 | 15,106 | 6,107 |
| 2000 | 26,702 | 296 | 1,241 | 3,296 | 3,103 | 3,859 | 3,859 | 4,923 | 1,304 | 2,332 | 1,758 | 476 | 255 | 5,155 | 15,421 | 6,126 |
| 2001 | 26,786 | 288 | 1,220 | 3,287 | 3,156 | 3,778 | 3,935 | 4,992 | 1,297 | 2,326 | 1,771 | 471 | 263 | 5,119 | 15,538 | 6,129 |
| 2002 | 26,868 | 287 | 1,195 | 3,280 | 3,207 | 3,685 | 4,007 | 5,060 | 1,302 | 2,328 | 1,787 | 460 | 270 | 5,091 | 15,631 | 6,146 |
| 2003 | 26,956 | 295 | 1,175 | 3,256 | 3,280 | 3,610 | 4,051 | 5,103 | 1,329 | 2,338 | 1,807 | 436 | 275 | 5,064 | 15,705 | 6,186 |
| 2004 | 27,062 | 306 | 1,165 | 3,224 | 3,342 | 3,552 | 4,097 | 5,141 | 1,365 | 2,345 | 1,815 | 430 | 280 | 5,031 | 15,796 | 6,235 |
| 2005 | 27,223 | 312 | 1,178 | 3,180 | 3,409 | 3,548 | 4,121 | 5,183 | 1,406 | 2,348 | 1,796 | 456 | 285 | 5,008 | 15,922 | 6,292 |
| 2006 | 27,358 | 319 | 1,201 | 3,127 | 3,458 | 3,523 | 4,134 | 5,239 | 1,466 | 2,333 | 1,778 | 492 | 286 | 4,990 | 16,012 | 6,355 |
| 2007 | 27,503 | 329 | 1,233 | 3,082 | 3,505 | 3,490 | 4,132 | 5,237 | 1,581 | 2,342 | 1,767 | 520 | 286 | 4,982 | 16,026 | 6,496 |

Note: Figures may not add exactly due to rounding.

1 Between 2010 and 2020, state pension age will change from 65 years for men and 60 years for women to 65 years for both sexes. Tel no. for all enquiries relating to population estimates:- 01329 444661

**Table 1.4 continued** **Population: age and sex**

Constituent countries of the United Kingdom

Numbers (thousands)

| Mid-year | All ages | Age group | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Under 1 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–59 | 60–64 | 65–74 | 75–84 | 85–89 | 90 and over | Under 16 | 16–64M/59F[1] | 65M/65F[1] and over |
| **England** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 46,821 | 598 | 2,235 | 6,678 | 7,440 | 6,703 | 5,663 | 7,948 | 2,449 | 4,347 | 2,249 | 362 | 149 | 10,285 | 28,133 | 8,403 |
| 1986 | 47,188 | 618 | 2,380 | 5,869 | 7,623 | 6,682 | 6,478 | 7,672 | 2,559 | 4,199 | 2,501 | 435 | 172 | 9,583 | 28,962 | 8,643 |
| 1991 | 47,875 | 660 | 2,560 | 5,885 | 6,772 | 7,460 | 6,633 | 7,920 | 2,399 | 4,222 | 2,626 | 529 | 210 | 9,658 | 29,390 | 8,827 |
| 1996 | 48,519 | 603 | 2,523 | 6,255 | 5,985 | 7,667 | 6,638 | 8,822 | 2,310 | 4,217 | 2,631 | 602 | 269 | 9,985 | 29,639 | 8,895 |
| 2000 | 49,233 | 575 | 2,406 | 6,375 | 5,923 | 7,304 | 7,257 | 9,199 | 2,411 | 4,107 | 2,727 | 641 | 309 | 9,980 | 30,243 | 9,010 |
| 2001 | 49,450 | 558 | 2,366 | 6,359 | 6,032 | 7,171 | 7,407 | 9,327 | 2,395 | 4,113 | 2,764 | 638 | 321 | 9,908 | 30,487 | 9,055 |
| 2002 | 49,652 | 559 | 2,313 | 6,348 | 6,153 | 7,003 | 7,550 | 9,439 | 2,399 | 4,129 | 2,803 | 625 | 331 | 9,855 | 30,686 | 9,111 |
| 2003 | 49,866 | 576 | 2,275 | 6,305 | 6,304 | 6,859 | 7,641 | 9,522 | 2,445 | 4,155 | 2,850 | 596 | 340 | 9,812 | 30,867 | 9,188 |
| 2004 | 50,111 | 597 | 2,262 | 6,245 | 6,450 | 6,751 | 7,712 | 9,591 | 2,509 | 4,175 | 2,875 | 593 | 349 | 9,755 | 31,083 | 9,273 |
| 2005 | 50,466 | 606 | 2,289 | 6,161 | 6,583 | 6,742 | 7,772 | 9,675 | 2,586 | 4,189 | 2,865 | 638 | 357 | 9,713 | 31,384 | 9,370 |
| 2006 | 50,763 | 620 | 2,335 | 6,051 | 6,696 | 6,708 | 7,793 | 9,777 | 2,697 | 4,171 | 2,860 | 695 | 360 | 9,674 | 31,627 | 9,462 |
| 2007 | 51,092 | 641 | 2,398 | 5,961 | 6,812 | 6,669 | 7,791 | 9,758 | 2,904 | 4,192 | 2,865 | 739 | 363 | 9,656 | 31,792 | 9,645 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 22,795 | 306 | 1,147 | 3,430 | 3,790 | 3,377 | 2,856 | 3,938 | 1,154 | 1,902 | 777 | 89 | 30 | 5,280 | 14,717 | 2,798 |
| 1986 | 22,949 | 317 | 1,219 | 3,010 | 3,862 | 3,357 | 3,249 | 3,822 | 1,224 | 1,853 | 897 | 108 | 33 | 4,911 | 15,147 | 2,891 |
| 1991 | 23,291 | 336 | 1,307 | 3,011 | 3,439 | 3,721 | 3,311 | 3,957 | 1,159 | 1,900 | 970 | 141 | 39 | 4,938 | 15,302 | 3,050 |
| 1996 | 23,629 | 309 | 1,294 | 3,198 | 3,023 | 3,818 | 3,302 | 4,390 | 1,133 | 1,932 | 1,003 | 172 | 55 | 5,110 | 15,358 | 3,161 |
| 2000 | 24,030 | 294 | 1,232 | 3,266 | 2,995 | 3,638 | 3,604 | 4,562 | 1,184 | 1,917 | 1,078 | 192 | 69 | 5,113 | 15,661 | 3,256 |
| 2001 | 24,166 | 285 | 1,212 | 3,257 | 3,053 | 3,580 | 3,681 | 4,624 | 1,176 | 1,928 | 1,103 | 194 | 73 | 5,075 | 15,793 | 3,298 |
| 2002 | 24,290 | 286 | 1,182 | 3,253 | 3,127 | 3,500 | 3,755 | 4,673 | 1,176 | 1,942 | 1,128 | 193 | 77 | 5,047 | 15,904 | 3,339 |
| 2003 | 24,419 | 296 | 1,163 | 3,232 | 3,209 | 3,425 | 3,803 | 4,715 | 1,197 | 1,958 | 1,154 | 186 | 80 | 5,028 | 16,012 | 3,379 |
| 2004 | 24,563 | 306 | 1,159 | 3,202 | 3,297 | 3,371 | 3,831 | 4,748 | 1,228 | 1,972 | 1,172 | 190 | 84 | 5,001 | 16,143 | 3,419 |
| 2005 | 24,758 | 310 | 1,172 | 3,160 | 3,365 | 3,365 | 3,868 | 4,791 | 1,267 | 1,984 | 1,179 | 210 | 88 | 4,979 | 16,317 | 3,461 |
| 2006 | 24,926 | 317 | 1,196 | 3,100 | 3,432 | 3,353 | 3,875 | 4,839 | 1,320 | 1,981 | 1,190 | 233 | 91 | 4,957 | 16,475 | 3,494 |
| 2007 | 25,114 | 328 | 1,228 | 3,050 | 3,506 | 3,345 | 3,874 | 4,821 | 1,418 | 1,995 | 1,205 | 251 | 93 | 4,944 | 16,626 | 3,544 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 24,026 | 292 | 1,088 | 3,248 | 3,650 | 3,327 | 2,807 | 4,009 | 1,295 | 2,445 | 1,472 | 273 | 119 | 5,004 | 13,416 | 5,605 |
| 1986 | 24,239 | 301 | 1,161 | 2,859 | 3,761 | 3,325 | 3,229 | 3,850 | 1,335 | 2,346 | 1,604 | 326 | 140 | 4,672 | 13,815 | 5,752 |
| 1991 | 24,584 | 324 | 1,253 | 2,873 | 3,333 | 3,739 | 3,322 | 3,964 | 1,239 | 2,323 | 1,656 | 388 | 171 | 4,720 | 14,088 | 5,777 |
| 1996 | 24,890 | 293 | 1,229 | 3,056 | 2,961 | 3,849 | 3,336 | 4,432 | 1,177 | 2,286 | 1,628 | 430 | 214 | 4,876 | 14,281 | 5,734 |
| 2000 | 25,203 | 281 | 1,174 | 3,109 | 2,928 | 3,667 | 3,653 | 4,637 | 1,227 | 2,190 | 1,649 | 448 | 240 | 4,867 | 14,582 | 5,755 |
| 2001 | 25,284 | 273 | 1,154 | 3,102 | 2,979 | 3,591 | 3,726 | 4,702 | 1,219 | 2,185 | 1,661 | 444 | 248 | 4,834 | 14,694 | 5,757 |
| 2002 | 25,362 | 273 | 1,131 | 3,095 | 3,026 | 3,503 | 3,795 | 4,767 | 1,223 | 2,187 | 1,676 | 433 | 254 | 4,808 | 14,782 | 5,772 |
| 2003 | 25,448 | 280 | 1,112 | 3,073 | 3,095 | 3,433 | 3,838 | 4,808 | 1,248 | 2,197 | 1,696 | 410 | 260 | 4,784 | 14,854 | 5,809 |
| 2004 | 25,548 | 291 | 1,103 | 3,043 | 3,153 | 3,380 | 3,881 | 4,843 | 1,280 | 2,203 | 1,703 | 403 | 264 | 4,753 | 14,940 | 5,854 |
| 2005 | 25,708 | 296 | 1,117 | 3,001 | 3,218 | 3,378 | 3,905 | 4,885 | 1,319 | 2,206 | 1,686 | 428 | 269 | 4,733 | 15,066 | 5,908 |
| 2006 | 25,837 | 303 | 1,139 | 2,952 | 3,264 | 3,355 | 3,918 | 4,938 | 1,377 | 2,190 | 1,670 | 461 | 270 | 4,717 | 15,152 | 5,968 |
| 2007 | 25,978 | 312 | 1,170 | 2,910 | 3,306 | 3,324 | 3,917 | 4,937 | 1,485 | 2,198 | 1,660 | 488 | 270 | 4,711 | 15,166 | 6,100 |
| **Wales** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 2,813 | 36 | 136 | 407 | 434 | 383 | 333 | 485 | 158 | 272 | 139 | 21 | 8 | 626 | 1,663 | 525 |
| 1986 | 2,811 | 37 | 143 | 357 | 438 | 369 | 378 | 464 | 166 | 271 | 154 | 26 | 10 | 578 | 1,686 | 547 |
| 1991 | 2,873 | 38 | 153 | 363 | 393 | 402 | 389 | 486 | 154 | 284 | 164 | 32 | 13 | 589 | 1,711 | 573 |
| 1996 | 2,891 | 34 | 146 | 381 | 352 | 409 | 379 | 541 | 147 | 279 | 170 | 37 | 17 | 598 | 1,714 | 578 |
| 2000 | 2,907 | 32 | 138 | 383 | 352 | 378 | 403 | 565 | 152 | 265 | 180 | 39 | 19 | 591 | 1,734 | 581 |
| 2001 | 2,910 | 32 | 136 | 382 | 356 | 365 | 409 | 572 | 154 | 264 | 183 | 39 | 20 | 587 | 1,739 | 584 |
| 2002 | 2,920 | 30 | 132 | 380 | 365 | 354 | 414 | 578 | 156 | 265 | 185 | 39 | 20 | 582 | 1,749 | 589 |
| 2003 | 2,931 | 31 | 129 | 377 | 376 | 345 | 417 | 582 | 161 | 268 | 187 | 38 | 21 | 577 | 1,759 | 595 |
| 2004 | 2,946 | 32 | 127 | 373 | 385 | 339 | 421 | 586 | 166 | 270 | 188 | 39 | 21 | 572 | 1,773 | 602 |
| 2005 | 2,954 | 32 | 126 | 367 | 390 | 335 | 421 | 589 | 171 | 271 | 186 | 42 | 21 | 566 | 1,780 | 608 |
| 2006 | 2,966 | 33 | 127 | 361 | 399 | 332 | 421 | 592 | 177 | 273 | 186 | 45 | 22 | 561 | 1,790 | 615 |
| 2007 | 2,980 | 34 | 130 | 353 | 407 | 330 | 418 | 590 | 188 | 276 | 185 | 48 | 22 | 557 | 1,797 | 627 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 1,365 | 18 | 70 | 209 | 221 | 193 | 168 | 240 | 73 | 118 | 48 | 5 | 2 | 321 | 871 | 173 |
| 1986 | 1,362 | 19 | 73 | 184 | 221 | 186 | 190 | 231 | 79 | 119 | 54 | 7 | 2 | 297 | 885 | 181 |
| 1991 | 1,391 | 20 | 78 | 186 | 199 | 199 | 194 | 242 | 74 | 128 | 60 | 8 | 2 | 302 | 891 | 198 |
| 1996 | 1,401 | 17 | 74 | 195 | 179 | 203 | 187 | 269 | 72 | 128 | 64 | 10 | 3 | 306 | 890 | 206 |
| 2000 | 1,408 | 16 | 71 | 196 | 177 | 185 | 198 | 280 | 75 | 124 | 71 | 12 | 4 | 303 | 895 | 210 |
| 2001 | 1,409 | 16 | 69 | 196 | 179 | 178 | 200 | 283 | 75 | 124 | 73 | 12 | 4 | 301 | 895 | 212 |
| 2002 | 1,414 | 16 | 68 | 195 | 184 | 172 | 202 | 285 | 77 | 125 | 74 | 12 | 5 | 299 | 900 | 215 |
| 2003 | 1,423 | 16 | 66 | 194 | 190 | 168 | 204 | 287 | 79 | 127 | 75 | 11 | 5 | 296 | 908 | 218 |
| 2004 | 1,432 | 16 | 65 | 192 | 196 | 166 | 205 | 288 | 82 | 128 | 76 | 12 | 5 | 294 | 917 | 221 |
| 2005 | 1,439 | 17 | 65 | 189 | 200 | 166 | 205 | 290 | 84 | 129 | 77 | 13 | 5 | 291 | 924 | 224 |
| 2006 | 1,445 | 17 | 65 | 185 | 204 | 164 | 205 | 291 | 87 | 130 | 77 | 15 | 5 | 288 | 929 | 227 |
| 2007 | 1,454 | 17 | 67 | 181 | 209 | 164 | 203 | 289 | 93 | 132 | 78 | 16 | 6 | 286 | 937 | 231 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 1,448 | 18 | 66 | 199 | 213 | 190 | 165 | 246 | 85 | 154 | 91 | 16 | 6 | 305 | 791 | 352 |
| 1986 | 1,449 | 18 | 70 | 173 | 217 | 184 | 188 | 233 | 87 | 152 | 100 | 20 | 8 | 282 | 801 | 366 |
| 1991 | 1,482 | 19 | 75 | 177 | 194 | 203 | 195 | 244 | 80 | 156 | 104 | 24 | 10 | 288 | 820 | 375 |
| 1996 | 1,490 | 16 | 71 | 186 | 173 | 206 | 192 | 272 | 75 | 151 | 106 | 27 | 13 | 293 | 825 | 373 |
| 2000 | 1,499 | 15 | 67 | 186 | 175 | 192 | 206 | 285 | 77 | 142 | 109 | 28 | 15 | 288 | 840 | 371 |
| 2001 | 1,502 | 15 | 66 | 186 | 177 | 187 | 209 | 289 | 78 | 141 | 110 | 27 | 15 | 286 | 844 | 372 |
| 2002 | 1,506 | 15 | 65 | 185 | 181 | 182 | 212 | 293 | 80 | 140 | 111 | 27 | 16 | 283 | 849 | 374 |
| 2003 | 1,508 | 15 | 63 | 183 | 185 | 176 | 214 | 295 | 82 | 141 | 112 | 27 | 16 | 280 | 851 | 377 |
| 2004 | 1,514 | 15 | 62 | 182 | 189 | 172 | 216 | 298 | 84 | 142 | 112 | 26 | 16 | 278 | 856 | 380 |
| 2005 | 1,515 | 16 | 61 | 179 | 191 | 170 | 216 | 299 | 87 | 142 | 110 | 28 | 16 | 275 | 856 | 383 |
| 2006 | 1,521 | 16 | 62 | 176 | 195 | 168 | 216 | 301 | 90 | 143 | 108 | 30 | 16 | 273 | 861 | 387 |
| 2007 | 1,526 | 16 | 63 | 172 | 198 | 166 | 215 | 300 | 96 | 144 | 107 | 32 | 16 | 271 | 860 | 395 |

See notes on first page of table.

**Table 1.4 continued** Population: age and sex

Constituent countries of the United Kingdom

Numbers (thousands)

| Mid-year | All ages | Age group | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Under 1 | 1–4 | 5–14 | 15–24 | 25–34 | 35–44 | 45–59 | 60–64 | 65–74 | 75–84 | 85–89 | 90 and over | Under 16 | 16–64M/59F[1] | 65M/60F[1] and over |
| **Scotland** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 5,180 | 69 | 249 | 780 | 875 | 724 | 603 | 880 | 260 | 460 | 232 | 35 | 14 | 1,188 | 3,110 | 882 |
| 1986 | 5,112 | 66 | 257 | 656 | 863 | 739 | 665 | 849 | 273 | 435 | 252 | 42 | 15 | 1,061 | 3,161 | 890 |
| 1991 | 5,083 | 66 | 258 | 634 | 746 | 795 | 696 | 853 | 265 | 441 | 259 | 51 | 19 | 1,021 | 3,151 | 912 |
| 1996 | 5,092 | 59 | 252 | 643 | 651 | 798 | 722 | 925 | 259 | 448 | 256 | 57 | 24 | 1,019 | 3,151 | 922 |
| 2000 | 5,063 | 53 | 230 | 636 | 628 | 717 | 774 | 962 | 263 | 445 | 267 | 59 | 28 | 985 | 3,141 | 937 |
| 2001 | 5,064 | 52 | 224 | 629 | 633 | 696 | 782 | 979 | 262 | 447 | 272 | 59 | 29 | 970 | 3,150 | 944 |
| 2002 | 5,055 | 51 | 217 | 622 | 639 | 669 | 788 | 993 | 262 | 449 | 276 | 58 | 30 | 955 | 3,150 | 950 |
| 2003 | 5,057 | 52 | 212 | 614 | 648 | 648 | 793 | 1,008 | 265 | 452 | 281 | 55 | 31 | 943 | 3,156 | 958 |
| 2004 | 5,078 | 54 | 210 | 609 | 653 | 635 | 796 | 1,025 | 270 | 455 | 286 | 54 | 31 | 935 | 3,175 | 968 |
| 2005 | 5,095 | 54 | 211 | 600 | 659 | 629 | 794 | 1,042 | 273 | 457 | 286 | 59 | 32 | 929 | 3,191 | 975 |
| 2006 | 5,117 | 55 | 213 | 588 | 668 | 627 | 790 | 1,058 | 280 | 456 | 287 | 63 | 32 | 922 | 3,213 | 983 |
| 2007 | 5,144 | 57 | 218 | 576 | 676 | 629 | 781 | 1,060 | 301 | 457 | 290 | 66 | 32 | 917 | 3,227 | 1,001 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 2,495 | 35 | 128 | 400 | 445 | 364 | 298 | 424 | 118 | 194 | 77 | 8 | 3 | 610 | 1,603 | 282 |
| 1986 | 2,462 | 34 | 131 | 336 | 438 | 371 | 331 | 410 | 127 | 184 | 86 | 10 | 3 | 543 | 1,636 | 283 |
| 1991 | 2,445 | 34 | 132 | 324 | 377 | 394 | 345 | 415 | 124 | 192 | 91 | 13 | 3 | 522 | 1,623 | 299 |
| 1996 | 2,447 | 30 | 128 | 328 | 327 | 392 | 355 | 454 | 122 | 198 | 93 | 15 | 5 | 521 | 1,616 | 310 |
| 2000 | 2,432 | 28 | 118 | 326 | 315 | 347 | 377 | 474 | 125 | 199 | 100 | 17 | 6 | 505 | 1,606 | 322 |
| 2001 | 2,434 | 26 | 115 | 322 | 319 | 337 | 379 | 483 | 125 | 200 | 103 | 17 | 6 | 497 | 1,610 | 327 |
| 2002 | 2,432 | 26 | 111 | 319 | 324 | 325 | 382 | 490 | 125 | 202 | 106 | 17 | 7 | 489 | 1,612 | 331 |
| 2003 | 2,435 | 26 | 108 | 314 | 329 | 315 | 383 | 496 | 126 | 204 | 108 | 16 | 7 | 483 | 1,616 | 336 |
| 2004 | 2,446 | 28 | 107 | 312 | 332 | 310 | 384 | 503 | 129 | 207 | 111 | 16 | 7 | 479 | 1,627 | 341 |
| 2005 | 2,456 | 28 | 107 | 307 | 335 | 309 | 382 | 511 | 131 | 208 | 112 | 18 | 7 | 476 | 1,635 | 345 |
| 2006 | 2,469 | 28 | 109 | 301 | 340 | 310 | 380 | 517 | 135 | 208 | 113 | 20 | 8 | 472 | 1,649 | 349 |
| 2007 | 2,486 | 29 | 112 | 295 | 345 | 313 | 375 | 517 | 146 | 210 | 116 | 21 | 8 | 469 | 1,662 | 354 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 2,685 | 33 | 121 | 380 | 430 | 359 | 305 | 456 | 142 | 265 | 155 | 27 | 11 | 579 | 1,506 | 600 |
| 1986 | 2,649 | 32 | 126 | 320 | 424 | 368 | 334 | 439 | 146 | 250 | 166 | 32 | 12 | 518 | 1,525 | 606 |
| 1991 | 2,639 | 32 | 126 | 309 | 369 | 402 | 351 | 437 | 141 | 249 | 168 | 38 | 16 | 499 | 1,528 | 612 |
| 1996 | 2,645 | 28 | 123 | 315 | 324 | 406 | 367 | 470 | 137 | 250 | 164 | 42 | 20 | 498 | 1,535 | 612 |
| 2000 | 2,631 | 26 | 112 | 310 | 313 | 369 | 397 | 488 | 138 | 246 | 166 | 43 | 22 | 480 | 1,535 | 616 |
| 2001 | 2,630 | 26 | 109 | 307 | 314 | 359 | 403 | 496 | 137 | 246 | 169 | 43 | 23 | 473 | 1,540 | 617 |
| 2002 | 2,623 | 25 | 106 | 303 | 315 | 344 | 406 | 504 | 137 | 247 | 171 | 41 | 23 | 466 | 1,538 | 619 |
| 2003 | 2,623 | 25 | 104 | 300 | 318 | 332 | 410 | 512 | 139 | 248 | 173 | 39 | 24 | 460 | 1,540 | 622 |
| 2004 | 2,632 | 26 | 103 | 297 | 321 | 325 | 412 | 521 | 141 | 248 | 175 | 38 | 24 | 457 | 1,549 | 627 |
| 2005 | 2,639 | 26 | 103 | 293 | 324 | 320 | 411 | 531 | 142 | 249 | 174 | 41 | 25 | 453 | 1,556 | 630 |
| 2006 | 2,647 | 27 | 104 | 287 | 328 | 317 | 410 | 541 | 145 | 247 | 174 | 43 | 25 | 450 | 1,564 | 634 |
| 2007 | 2,659 | 28 | 106 | 281 | 332 | 316 | 406 | 542 | 155 | 247 | 174 | 45 | 24 | 448 | 1,564 | 646 |
| **Northern Ireland** | | | | | | | | | | | | | | | | |
| **Persons** | | | | | | | | | | | | | | | | |
| 1981 | 1,543 | 27 | 106 | 282 | 271 | 200 | 175 | 227 | 68 | 116 | 57 | .. | .. | 444 | 874 | 224 |
| 1986 | 1,574 | 28 | 107 | 261 | 277 | 217 | 190 | 227 | 71 | 115 | 64 | 16 | .. | 423 | 917 | 234 |
| 1991 | 1,607 | 26 | 106 | 260 | 256 | 240 | 200 | 241 | 70 | 121 | 69 | 14 | 6 | 417 | 945 | 246 |
| 1996 | 1,662 | 24 | 99 | 266 | 244 | 257 | 220 | 266 | 70 | 123 | 72 | 15 | 7 | 415 | 993 | 253 |
| 2000 | 1,683 | 22 | 95 | 259 | 237 | 247 | 243 | 284 | 73 | 123 | 75 | 16 | 7 | 403 | 1,020 | 259 |
| 2001 | 1,689 | 22 | 93 | 255 | 240 | 243 | 248 | 290 | 74 | 123 | 77 | 16 | 7 | 397 | 1,030 | 262 |
| 2002 | 1,697 | 22 | 91 | 253 | 243 | 238 | 251 | 296 | 75 | 125 | 79 | 16 | 7 | 393 | 1,037 | 266 |
| 2003 | 1,703 | 21 | 89 | 251 | 246 | 233 | 254 | 301 | 78 | 126 | 81 | 16 | 8 | 388 | 1,044 | 271 |
| 2004 | 1,710 | 22 | 87 | 248 | 250 | 229 | 256 | 305 | 81 | 127 | 82 | 16 | 8 | 383 | 1,052 | 275 |
| 2005 | 1,724 | 23 | 88 | 245 | 253 | 228 | 257 | 310 | 84 | 128 | 83 | 17 | 8 | 381 | 1,064 | 280 |
| 2006 | 1,742 | 23 | 89 | 242 | 258 | 229 | 259 | 316 | 87 | 130 | 83 | 18 | 8 | 380 | 1,077 | 284 |
| 2007 | 1,759 | 24 | 91 | 239 | 260 | 231 | 259 | 321 | 90 | 132 | 84 | 19 | 8 | 380 | 1,089 | 290 |
| **Males** | | | | | | | | | | | | | | | | |
| 1981 | 757 | 14 | 54 | 145 | 140 | 102 | 87 | 109 | 32 | 50 | 21 | .. | .. | 228 | 454 | 75 |
| 1986 | 768 | 14 | 55 | 134 | 142 | 109 | 95 | 110 | 33 | 50 | 23 | 4 | .. | 217 | 474 | 77 |
| 1991 | 783 | 13 | 54 | 133 | 131 | 119 | 100 | 118 | 32 | 53 | 26 | 4 | 1 | 213 | 487 | 83 |
| 1996 | 810 | 12 | 51 | 136 | 124 | 128 | 109 | 131 | 33 | 54 | 27 | 4 | 1 | 212 | 511 | 87 |
| 2000 | 820 | 11 | 49 | 133 | 120 | 122 | 119 | 141 | 35 | 55 | 29 | 5 | 2 | 207 | 524 | 90 |
| 2001 | 824 | 11 | 48 | 131 | 122 | 120 | 122 | 144 | 35 | 56 | 30 | 5 | 2 | 204 | 529 | 92 |
| 2002 | 829 | 11 | 47 | 130 | 124 | 117 | 123 | 147 | 36 | 56 | 31 | 5 | 2 | 202 | 534 | 94 |
| 2003 | 833 | 11 | 46 | 129 | 126 | 115 | 124 | 149 | 38 | 57 | 31 | 5 | 2 | 199 | 538 | 95 |
| 2004 | 836 | 11 | 45 | 127 | 128 | 113 | 125 | 151 | 39 | 58 | 32 | 5 | 2 | 197 | 542 | 97 |
| 2005 | 844 | 12 | 45 | 126 | 130 | 113 | 126 | 153 | 41 | 59 | 32 | 5 | 2 | 196 | 550 | 99 |
| 2006 | 853 | 12 | 46 | 124 | 132 | 113 | 127 | 156 | 42 | 60 | 33 | 6 | 2 | 195 | 558 | 101 |
| 2007 | 862 | 13 | 47 | 123 | 134 | 114 | 127 | 158 | 44 | 61 | 33 | 6 | 2 | 195 | 564 | 103 |
| **Females** | | | | | | | | | | | | | | | | |
| 1981 | 786 | 13 | 52 | 137 | 130 | 98 | 88 | 118 | 37 | 66 | 37 | .. | .. | 216 | 420 | 150 |
| 1986 | 805 | 13 | 52 | 127 | 135 | 107 | 96 | 118 | 38 | 65 | 41 | 12 | .. | 206 | 442 | 157 |
| 1991 | 824 | 13 | 52 | 127 | 125 | 121 | 100 | 123 | 38 | 67 | 44 | 10 | 4 | 203 | 458 | 163 |
| 1996 | 851 | 11 | 49 | 130 | 120 | 129 | 110 | 135 | 37 | 69 | 45 | 11 | 6 | 203 | 482 | 167 |
| 2000 | 862 | 11 | 46 | 126 | 118 | 125 | 124 | 143 | 38 | 68 | 46 | 11 | 6 | 196 | 497 | 169 |
| 2001 | 865 | 10 | 45 | 124 | 119 | 123 | 126 | 146 | 38 | 68 | 47 | 11 | 6 | 193 | 501 | 170 |
| 2002 | 868 | 11 | 44 | 123 | 119 | 120 | 128 | 149 | 39 | 68 | 48 | 11 | 6 | 191 | 504 | 173 |
| 2003 | 870 | 10 | 43 | 122 | 120 | 118 | 129 | 152 | 40 | 68 | 49 | 11 | 6 | 189 | 506 | 175 |
| 2004 | 874 | 11 | 42 | 121 | 122 | 116 | 130 | 154 | 42 | 69 | 50 | 11 | 6 | 187 | 509 | 178 |
| 2005 | 880 | 11 | 43 | 119 | 123 | 115 | 131 | 157 | 43 | 69 | 50 | 11 | 6 | 186 | 514 | 181 |
| 2006 | 888 | 11 | 43 | 118 | 126 | 115 | 132 | 160 | 45 | 69 | 51 | 12 | 6 | 185 | 520 | 183 |
| 2007 | 897 | 12 | 44 | 116 | 127 | 117 | 132 | 163 | 46 | 70 | 51 | 13 | 6 | 185 | 526 | 187 |

See notes on first page of table.

## Table 1.5 Population: age, sex and legal marital status

England and Wales

Numbers (thousands)

| Mid-year | Total population | Males | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Single | Married | Divorced | Widowed | Total | Single | Married | Divorced | Widowed | Total |
| **Aged** | | | | | | | | | | | |
| **16 and over** | | | | | | | | | | | |
| 1971 | 36,818 | 4,173 | 12,522 | 187 | 682 | 17,563 | 3,583 | 12,566 | 296 | 2,810 | 19,255 |
| 1976 | 37,486 | 4,369 | 12,511 | 376 | 686 | 17,941 | 3,597 | 12,538 | 533 | 2,877 | 19,545 |
| 1981 | 38,724 | 5,013 | 12,238 | 611 | 698 | 18,559 | 4,114 | 12,284 | 828 | 2,939 | 20,165 |
| 1986 | 39,837 | 5,625 | 11,867 | 917 | 695 | 19,103 | 4,617 | 12,000 | 1,165 | 2,953 | 20,734 |
| 1991 | 40,501 | 5,891 | 11,636 | 1,187 | 727 | 19,441 | 4,817 | 11,833 | 1,459 | 2,951 | 21,060 |
| 1996 | 40,827 | 6,225 | 11,310 | 1,346 | 733 | 19,614 | 5,168 | 11,433 | 1,730 | 2,881 | 21,212 |
| 1999 | 41,325 | 6,582 | 11,143 | 1,433 | 732 | 19,890 | 5,526 | 11,235 | 1,875 | 2,800 | 21,435 |
| 2000 | 41,569 | 6,721 | 11,113 | 1,456 | 731 | 20,022 | 5,650 | 11,199 | 1,927 | 2,772 | 21,547 |
| 2001 | 41,865 | 6,894 | 11,090 | 1,482 | 733 | 20,198 | 5,798 | 11,150 | 1,975 | 2,745 | 21,667 |
| 2002[1] | 42,135 | 7,086 | 11,008 | 1,534 | 730 | 20,358 | 5,957 | 11,075 | 2,036 | 2,710 | 21,777 |
| 2003[1] | 42,409 | 7,272 | 10,929 | 1,589 | 727 | 20,517 | 6,126 | 11,000 | 2,096 | 2,669 | 21,892 |
| 2004[1] | 42,731 | 7,483 | 10,851 | 1,642 | 724 | 20,700 | 6,311 | 10,935 | 2,156 | 2,629 | 22,031 |
| 2005[1] | 43,141 | 7,708 | 10,801 | 1,696 | 722 | 20,927 | 6,529 | 10,882 | 2,215 | 2,589 | 22,214 |
| 2006 | 43,494 | 7,944 | 10,723 | 1,739 | 720 | 21,126 | 6,740 | 10,812 | 2,266 | 2,549 | 22,367 |
| **16–19** | | | | | | | | | | | |
| 1971 | 2,666 | 1,327 | 34 | 0 | 0 | 1,362 | 1,163 | 142 | 0 | 0 | 1,305 |
| 1976 | 2,901 | 1,454 | 28 | 0 | 0 | 1,482 | 1,289 | 129 | 0 | 0 | 1,419 |
| 1981 | 3,310 | 1,675 | 20 | 0 | 0 | 1,694 | 1,523 | 93 | 0 | 0 | 1,616 |
| 1986 | 3,131 | 1,587 | 10 | 0 | 0 | 1,596 | 1,484 | 49 | 1 | 0 | 1,535 |
| 1991 | 2,665 | 1,358 | 8 | 0 | 0 | 1,366 | 1,267 | 32 | 0 | 0 | 1,300 |
| 1996 | 2,402 | 1,209 | 6 | 0 | 0 | 1,216 | 1,164 | 21 | 0 | 0 | 1,186 |
| 1999 | 2,543 | 1,280 | 6 | 1 | 1 | 1,288 | 1,234 | 20 | 1 | 1 | 1,255 |
| 2000 | 2,523 | 1,276 | 6 | 1 | 1 | 1,283 | 1,221 | 18 | 1 | 1 | 1,240 |
| 2001 | 2,567 | 1,304 | 5 | 1 | 1 | 1,312 | 1,237 | 16 | 1 | 1 | 1,255 |
| 2002[1] | 2,630 | 1,352 | 4 | 1 | 1 | 1,357 | 1,259 | 13 | 1 | 1 | 1,273 |
| 2003[1] | 2,703 | 1,392 | 4 | 1 | 1 | 1,397 | 1,293 | 12 | 0 | 1 | 1,306 |
| 2004[1] | 2,771 | 1,424 | 3 | 0 | 0 | 1,428 | 1,332 | 11 | 0 | 0 | 1,343 |
| 2005[1] | 2,801 | 1,434 | 2 | 0 | 0 | 1,436 | 1,355 | 9 | 0 | 0 | 1,365 |
| 2006 | 2,829 | 1,457 | 2 | 0 | 0 | 1,459 | 1,364 | 7 | 0 | 0 | 1,370 |
| **20–24** | | | | | | | | | | | |
| 1971 | 3,773 | 1,211 | 689 | 3 | 0 | 1,904 | 745 | 1,113 | 9 | 2 | 1,869 |
| 1976 | 3,395 | 1,167 | 557 | 4 | 0 | 1,728 | 725 | 925 | 16 | 2 | 1,667 |
| 1981 | 3,744 | 1,420 | 466 | 10 | 1 | 1,896 | 1,007 | 811 | 27 | 2 | 1,847 |
| 1986 | 4,171 | 1,768 | 317 | 14 | 0 | 2,099 | 1,383 | 657 | 32 | 1 | 2,072 |
| 1991 | 3,911 | 1,717 | 242 | 12 | 0 | 1,971 | 1,421 | 490 | 29 | 1 | 1,941 |
| 1996 | 3,291 | 1,538 | 117 | 3 | 0 | 1,658 | 1,361 | 260 | 11 | 1 | 1,633 |
| 1999 | 3,047 | 1,449 | 78 | 2 | 0 | 1,530 | 1,320 | 188 | 8 | 1 | 1,517 |
| 2000 | 3,088 | 1,470 | 74 | 3 | 0 | 1,548 | 1,352 | 180 | 8 | 1 | 1,540 |
| 2001 | 3,157 | 1,501 | 74 | 3 | 1 | 1,579 | 1,390 | 178 | 8 | 1 | 1,578 |
| 2002[1] | 3,212 | 1,533 | 69 | 3 | 1 | 1,606 | 1,430 | 167 | 8 | 1 | 1,606 |
| 2003[1] | 3,281 | 1,573 | 68 | 3 | 1 | 1,645 | 1,465 | 161 | 8 | 1 | 1,636 |
| 2004[1] | 3,376 | 1,639 | 69 | 3 | 1 | 1,712 | 1,497 | 157 | 8 | 2 | 1,664 |
| 2005[1] | 3,477 | 1,700 | 66 | 3 | 1 | 1,771 | 1,547 | 150 | 8 | 2 | 1,706 |
| 2006 | 3,558 | 1,749 | 59 | 3 | 1 | 1,812 | 1,599 | 138 | 7 | 1 | 1,746 |
| **25–29** | | | | | | | | | | | |
| 1971 | 3,267 | 431 | 1,206 | 16 | 1 | 1,654 | 215 | 1,367 | 29 | 4 | 1,614 |
| 1976 | 3,758 | 533 | 1,326 | 39 | 2 | 1,900 | 267 | 1,522 | 65 | 5 | 1,859 |
| 1981 | 3,372 | 588 | 1,057 | 54 | 1 | 1,700 | 331 | 1,247 | 89 | 4 | 1,671 |
| 1986 | 3,713 | 835 | 949 | 79 | 1 | 1,863 | 527 | 1,207 | 113 | 4 | 1,850 |
| 1991 | 4,154 | 1,132 | 856 | 82 | 1 | 2,071 | 800 | 1,158 | 123 | 2 | 2,083 |
| 1996 | 3,950 | 1,273 | 650 | 46 | 1 | 1,970 | 977 | 906 | 93 | 3 | 1,980 |
| 1999 | 3,687 | 1,304 | 497 | 34 | 1 | 1,836 | 1,051 | 725 | 72 | 3 | 1,851 |
| 2000 | 3,605 | 1,305 | 459 | 31 | 1 | 1,796 | 1,065 | 677 | 65 | 3 | 1,810 |
| 2001 | 3,487 | 1,293 | 420 | 28 | 1 | 1,742 | 1,059 | 625 | 58 | 3 | 1,745 |
| 2002[1] | 3,365 | 1,286 | 375 | 26 | 1 | 1,688 | 1,054 | 568 | 52 | 3 | 1,676 |
| 2003[1] | 3,284 | 1,281 | 340 | 25 | 1 | 1,647 | 1,060 | 527 | 49 | 2 | 1,638 |
| 2004[1] | 3,280 | 1,297 | 319 | 24 | 1 | 1,641 | 1,089 | 501 | 47 | 2 | 1,639 |
| 2005[1] | 3,354 | 1,344 | 307 | 23 | 1 | 1,675 | 1,143 | 488 | 46 | 2 | 1,679 |
| 2006 | 3,434 | 1,400 | 295 | 23 | 1 | 1,718 | 1,198 | 471 | 46 | 2 | 1,716 |

1 2002 to 2005 mid-year population estimates for England and Wales have been updated to include the latest revised estimates that take into account improved estimates of international migration.

**Table 1.5 continued** **Population: age, sex and legal marital status**

England and Wales

Numbers (thousands)

| Mid-year | Total population | Males | | | | | Females | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Single | Married | Divorced | Widowed | Total | Single | Married | Divorced | Widowed | Total |
| **30–34** | | | | | | | | | | | |
| 1971 | 2,897 | 206 | 1,244 | 23 | 3 | 1,475 | 111 | 1,269 | 34 | 8 | 1,422 |
| 1976 | 3,220 | 236 | 1,338 | 55 | 3 | 1,632 | 118 | 1,388 | 75 | 8 | 1,588 |
| 1981 | 3,715 | 318 | 1,451 | 97 | 3 | 1,869 | 165 | 1,544 | 129 | 9 | 1,846 |
| 1986 | 3,338 | 355 | 1,197 | 124 | 2 | 1,679 | 206 | 1,293 | 154 | 6 | 1,660 |
| 1991 | 3,708 | 520 | 1,172 | 155 | 2 | 1,849 | 335 | 1,330 | 189 | 5 | 1,859 |
| 1996 | 4,126 | 776 | 1,135 | 138 | 2 | 2,050 | 551 | 1,316 | 201 | 7 | 2,076 |
| 1999 | 4,113 | 877 | 1,043 | 121 | 3 | 2,044 | 651 | 1,223 | 188 | 7 | 2,069 |
| 2000 | 4,076 | 904 | 1,007 | 114 | 2 | 2,027 | 679 | 1,182 | 181 | 7 | 2,049 |
| 2001 | 4,050 | 934 | 971 | 108 | 2 | 2,016 | 711 | 1,142 | 174 | 7 | 2,033 |
| 2002[1] | 3,992 | 959 | 918 | 105 | 2 | 1,984 | 742 | 1,093 | 167 | 6 | 2,009 |
| 2003[1] | 3,919 | 979 | 864 | 102 | 2 | 1,947 | 766 | 1,041 | 159 | 6 | 1,972 |
| 2004[1] | 3,810 | 988 | 810 | 97 | 2 | 1,897 | 777 | 982 | 149 | 5 | 1,913 |
| 2005[1] | 3,724 | 1,002 | 761 | 92 | 2 | 1,856 | 791 | 933 | 139 | 5 | 1,868 |
| 2006 | 3,606 | 1,010 | 703 | 84 | 2 | 1,799 | 800 | 876 | 127 | 5 | 1,808 |
| **35–44** | | | | | | | | | | | |
| 1971 | 5,736 | 317 | 2,513 | 48 | 13 | 2,891 | 201 | 2,529 | 66 | 48 | 2,845 |
| 1976 | 5,608 | 286 | 2,442 | 104 | 12 | 2,843 | 167 | 2,427 | 129 | 42 | 2,765 |
| 1981 | 5,996 | 316 | 2,519 | 178 | 12 | 3,024 | 170 | 2,540 | 222 | 41 | 2,972 |
| 1986 | 6,856 | 396 | 2,738 | 293 | 12 | 3,438 | 213 | 2,815 | 350 | 39 | 3,418 |
| 1991 | 7,022 | 477 | 2,632 | 384 | 11 | 3,504 | 280 | 2,760 | 444 | 34 | 3,517 |
| 1996 | 7,017 | 653 | 2,426 | 398 | 12 | 3,489 | 427 | 2,568 | 497 | 36 | 3,528 |
| 1999 | 7,475 | 832 | 2,459 | 408 | 13 | 3,711 | 577 | 2,617 | 533 | 37 | 3,763 |
| 2000 | 7,661 | 899 | 2,481 | 410 | 12 | 3,802 | 635 | 2,640 | 547 | 37 | 3,859 |
| 2001 | 7,816 | 963 | 2,494 | 411 | 12 | 3,881 | 692 | 2,649 | 558 | 36 | 3,935 |
| 2002[1] | 7,964 | 1,031 | 2,490 | 424 | 12 | 3,957 | 751 | 2,650 | 572 | 35 | 4,007 |
| 2003[1] | 8,058 | 1,089 | 2,471 | 435 | 12 | 4,007 | 804 | 2,631 | 583 | 34 | 4,051 |
| 2004[1] | 8,133 | 1,141 | 2,441 | 443 | 11 | 4,036 | 858 | 2,613 | 593 | 32 | 4,097 |
| 2005[1] | 8,194 | 1,195 | 2,417 | 450 | 11 | 4,073 | 910 | 2,583 | 597 | 31 | 4,121 |
| 2006 | 8,213 | 1,249 | 2,371 | 448 | 11 | 4,080 | 965 | 2,543 | 595 | 30 | 4,134 |
| **45–64** | | | | | | | | | | | |
| 1971 | 11,887 | 502 | 4,995 | 81 | 173 | 5,751 | 569 | 4,709 | 125 | 733 | 6,136 |
| 1976 | 11,484 | 496 | 4,787 | 141 | 160 | 5,583 | 462 | 4,568 | 188 | 683 | 5,901 |
| 1981 | 11,040 | 480 | 4,560 | 218 | 147 | 5,405 | 386 | 4,358 | 271 | 620 | 5,635 |
| 1986 | 10,860 | 461 | 4,422 | 331 | 141 | 5,355 | 327 | 4,220 | 388 | 570 | 5,505 |
| 1991 | 10,960 | 456 | 4,394 | 456 | 127 | 5,433 | 292 | 4,211 | 521 | 503 | 5,527 |
| 1996 | 11,820 | 528 | 4,587 | 628 | 121 | 5,864 | 318 | 4,466 | 732 | 440 | 5,956 |
| 1999 | 12,198 | 589 | 4,627 | 706 | 121 | 6,043 | 355 | 4,541 | 844 | 415 | 6,155 |
| 2000 | 12,328 | 615 | 4,638 | 727 | 121 | 6,101 | 372 | 4,564 | 881 | 410 | 6,227 |
| 2001 | 12,447 | 644 | 4,647 | 747 | 121 | 6,159 | 391 | 4,578 | 918 | 401 | 6,289 |
| 2002[1] | 12,573 | 670 | 4,642 | 779 | 120 | 6,211 | 413 | 4,597 | 960 | 391 | 6,362 |
| 2003[1] | 12,710 | 702 | 4,643 | 814 | 119 | 6,278 | 437 | 4,612 | 1,002 | 381 | 6,432 |
| 2004[1] | 12,852 | 736 | 4,643 | 850 | 117 | 6,347 | 465 | 4,625 | 1,045 | 371 | 6,505 |
| 2005[1] | 13,021 | 774 | 4,652 | 888 | 117 | 6,431 | 497 | 4,642 | 1,090 | 362 | 6,590 |
| 2006 | 13,243 | 818 | 4,676 | 926 | 117 | 6,537 | 535 | 4,677 | 1,138 | 356 | 6,706 |
| **65 and over** | | | | | | | | | | | |
| 1971 | 6,592 | 179 | 1,840 | 17 | 492 | 2,527 | 580 | 1,437 | 32 | 2,016 | 4,065 |
| 1976 | 7,119 | 197 | 2,033 | 33 | 510 | 2,773 | 569 | 1,579 | 60 | 2,138 | 4,347 |
| 1981 | 7,548 | 216 | 2,167 | 54 | 534 | 2,971 | 533 | 1,692 | 90 | 2,263 | 4,578 |
| 1986 | 7,768 | 223 | 2,234 | 76 | 539 | 3,072 | 477 | 1,759 | 127 | 2,333 | 4,696 |
| 1991 | 8,080 | 231 | 2,332 | 99 | 586 | 3,248 | 422 | 1,853 | 152 | 2,405 | 4,832 |
| 1996 | 8,221 | 247 | 2,390 | 134 | 597 | 3,367 | 369 | 1,897 | 196 | 2,393 | 4,854 |
| 1999 | 8,262 | 251 | 2,431 | 161 | 594 | 3,437 | 338 | 1,922 | 230 | 2,336 | 4,825 |
| 2000 | 8,287 | 252 | 2,449 | 171 | 593 | 3,466 | 327 | 1,938 | 243 | 2,313 | 4,821 |
| 2001 | 8,342 | 254 | 2,478 | 183 | 595 | 3,510 | 318 | 1,960 | 259 | 2,295 | 4,832 |
| 2002[1] | 8,398 | 255 | 2,508 | 196 | 594 | 3,554 | 309 | 1,987 | 276 | 2,272 | 4,844 |
| 2003[1] | 8,454 | 257 | 2,538 | 210 | 593 | 3,597 | 301 | 2,017 | 295 | 2,245 | 4,857 |
| 2004[1] | 8,510 | 258 | 2,566 | 224 | 592 | 3,640 | 293 | 2,046 | 314 | 2,216 | 4,870 |
| 2005[1] | 8,571 | 260 | 2,596 | 239 | 590 | 3,685 | 286 | 2,077 | 335 | 2,187 | 4,885 |
| 2006 | 8,611 | 261 | 2,618 | 254 | 589 | 3,722 | 279 | 2,101 | 353 | 2,155 | 4,889 |

See notes on first page of table.

# Table 2.1 Vital statistics summary

Constituent countries of the United Kingdom

Numbers (thousands) and rates

| Year and quarter | All live births | | Live births outside marriage | | Marriages | | Civil Partnerships | | Divorces | | Deaths | | Infant mortality[6] | | Neonatal mortality[7] | | Perinatal mortality[8] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Rate[1] | Number | Rate[2] | Number | Rate[3] | Number | Rate[4] | Number | Rate[5] | Number | Rate[1] | Number | Rate[2] | Number | Rate[2] | Number | Rate[9] |
| **United Kingdom** | | | | | | | | | | | | | | | | | | |
| 1976 | 675.5 | 12.0 | 61.1 | 90 | 406.0 | .. | : | : | 135.4 | .. | 680.8 | 12.1 | 9.79 | 14.5 | 6.68 | 9.9 | 12.25 | 18.0 |
| 1981 | 730.7 | 13.0 | 91.3 | 125 | 397.8 | 49.4 | : | : | 156.4 | 11.3 | 658.0 | 11.7 | 8.16 | 11.2 | 4.93 | 6.7 | 8.79 | 12.0 |
| 1986 | 754.8 | 13.3 | 154.3 | 204 | 393.9 | .. | : | : | 168.2 | .. | 660.7 | 11.7 | 7.18 | 9.5 | 4.00 | 5.3 | 7.31 | 9.6 |
| 1991 | 792.3 | 13.8 | 236.1 | 298 | 349.7 | .. | : | : | 173.5 | .. | 646.2 | 11.2 | 5.82 | 7.4 | 3.46 | 4.4 | 6.45 | 8.1 |
| 1996 | 733.2 | 12.6 | 260.4 | 355 | 317.5 | .. | : | : | 171.7 | .. | 636.0 | 10.9 | 4.50 | 6.1 | 3.00 | 4.1 | 6.41 | 8.7 |
| 1999 | 700.0 | 11.9 | 271.6 | 388 | 301.1 | .. | : | : | 158.7 | .. | 632.1 | 10.8 | 4.05 | 5.8 | 2.73 | 3.9 | 5.79 | 8.2 |
| 2000 | 679.0 | 11.5 | 268.1 | 395 | 305.9 | .. | : | : | 154.6 | .. | 608.4 | 10.3 | 3.81 | 5.6 | 2.63 | 3.9 | 5.56 | 8.1 |
| 2001 | 669.1 | 11.3 | 268.0 | 401 | 286.1 | .. | : | : | 156.8 | .. | 602.3 | 10.2 | 3.66 | 5.5 | 2.44 | 3.7 | 5.39 | 8.0 |
| 2002 | 668.8 | 11.3 | 271.7 | 406 | 293.0 | .. | : | : | 160.5 | .. | 606.2 | 10.2 | 3.54 | 5.3 | 2.37 | 3.6 | 5.53 | 8.2 |
| 2003 | 695.6 | 11.7 | 288.5 | 415 | 308.6 | .. | : | : | 166.7 | .. | 612.0 | 10.3 | 3.69 | 5.3 | 2.54 | 3.7 | 5.92 | 8.5 |
| 2004 | 716.0 | 12.0 | 302.6 | 423 | 313.6 | .. | : | : | 167.1 | .. | 583.1 | 9.7 | 3.66 | 5.1 | 2.49 | 3.5 | 5.88 | 8.2 |
| 2005 | 722.5 | 12.0 | 310.2 | 429 | 286.8 | .. | 1.95[10] | .. | 155.1 | .. | 582.7 | 9.7 | 3.68 | 5.1 | 2.52 | 3.5 | 5.78 | 8.0 |
| 2006 | 748.6 | 12.4 | 326.8 | 437 | 275.1[P] | .. | 16.11 | .. | 148.1 | .. | 572.2 | 9.4 | 3.74 | 5.0 | 2.61 | 3.5 | 5.94 | 7.9 |
| 2007 | 772.2[P] | 12.7[P] | 343.2[P] | 444[P] | .. | .. | 8.73[P] | .. | 144.2[P] | .. | 574.7[P] | 9.4[P] | 3.74[P] | 4.8[P] | 2.55[P] | 3.3[P] | 5.97[P] | 7.7[P] |
| 2006 March | 178.9 | 12.0 | 77.5 | 433 | 30.2[P] | .. | 4.87 | .. | 37.7 | .. | 159.9 | 10.7 | 0.90 | 5.1 | 0.61 | 3.4 | 1.45 | 8.1 |
| June | 186.0 | 12.3 | 80.2 | 431 | 76.4[P] | .. | 4.36 | .. | 36.7 | .. | 141.4 | 9.4 | 0.94 | 5.0 | 0.65 | 3.5 | 1.50 | 8.0 |
| Sept | 195.2 | 12.8 | 85.8 | 439 | 120.7[P] | .. | 4.49 | .. | 37.0 | .. | 130.7 | 8.6 | 0.93 | 4.8 | 0.67 | 3.4 | 1.54 | 7.8 |
| Dec | 188.5 | 12.3 | 83.3 | 442 | 47.8[P] | .. | 2.38 | .. | 36.7 | .. | 140.2 | 9.2 | 0.97 | 5.2 | 0.68 | 3.6 | 1.45 | 7.7 |
| 2007 March | 184.4[P] | 12.3[P] | 81.9[P] | 444[P] | .. | .. | 1.69[P] | .. | 38.9[P] | .. | 159.3[P] | 10.6[P] | 0.91[P] | 4.9[P] | 0.64[P] | 3.4[P] | 1.47[P] | 7.9[P] |
| June | 189.8[P] | 12.5[P] | 82.6[P] | 435[P] | .. | .. | 2.37[P] | .. | 37.2[P] | .. | 138.0[P] | 9.1[P] | 0.99[P] | 5.2[P] | 0.66[P] | 3.5[P] | 1.52[P] | 8.0[P] |
| Sept | 202.8[P] | 13.2[P] | 90.5[P] | 446[P] | .. | .. | 2.96[P] | .. | 36.7[P] | .. | 129.9[P] | 8.4[P] | 0.87[P] | 4.3[P] | 0.59[P] | 2.9[P] | 1.50[P] | 7.3[P] |
| Dec | 195.3[P] | 12.7[P] | 88.1[P] | 451[P] | .. | .. | 1.71[P] | .. | 31.4[P] | .. | 147.5[P] | 9.6[P] | 0.88[P] | 4.5[P] | 0.60[P] | 3.1[P] | 1.49[P] | 7.6[P] |
| 2008 March | 195.2[P] | 12.8[P] | 88.7[P] | 455[P] | .. | .. | 1.25[P] | .. | .. | .. | 155.4[P] | 10.2[P] | 0.95[P] | 4.9[P] | 0.66[P] | 3.4[P] | 1.52[P] | 7.7[P] |
| June | 197.3[P] | 12.5[P] | 82.6[P] | 449[P] | .. | .. | .. | .. | .. | .. | 139.8[P] | 9.2[P] | 0.82[P] | 4.2[P] | 0.59[P] | 3.0[P] | 1.47[P] | 7.4[P] |
| **England and Wales** | | | | | | | | | | | | | | | | | | |
| 1976 | 584.3 | 11.8 | 53.8 | 92 | 358.6 | 57.7 | : | : | 126.7 | 10.1 | 598.5 | 12.1 | 8.34 | 14.3 | 5.66 | 9.7 | 10.45 | 17.7 |
| 1981 | 634.5 | 12.8 | 81.0 | 128 | 352.0 | 49.6 | : | : | 145.7 | 11.9 | 577.9 | 11.6 | 7.02 | 11.1 | 4.23 | 6.7 | 7.56 | 11.8 |
| 1986 | 661.0 | 13.2 | 141.3 | 214 | 347.9 | 43.6 | : | : | 153.9 | 12.9 | 581.2 | 11.6 | 6.31 | 9.6 | 3.49 | 5.3 | 6.37 | 9.6 |
| 1991 | 699.2 | 13.8 | 211.3 | 302 | 306.8 | 36.0 | : | : | 158.7 | 13.5 | 570.0 | 11.2 | 5.16 | 7.4 | 3.05 | 4.4 | 5.65 | 8.0 |
| 1996 | 649.5 | 12.6 | 232.7 | 358 | 279.0 | 30.9 | : | : | 157.1 | 13.8 | 560.1 | 10.9 | 3.99 | 6.1 | 2.68 | 4.1 | 5.62 | 8.6 |
| 1999 | 621.9 | 12.0 | 241.9 | 389 | 263.5 | 27.8 | : | : | 144.6 | 12.9 | 556.1 | 10.7 | 3.62 | 5.8 | 2.44 | 3.9 | 5.14 | 8.2 |
| 2000 | 604.4 | 11.6 | 238.6 | 395 | 268.0 | 27.8 | : | : | 141.1 | 12.7 | 535.7 | 10.3 | 3.38 | 5.6 | 2.34 | 3.9 | 4.96 | 8.2 |
| 2001 | 594.6 | 11.4 | 238.1 | 400 | 249.2 | 25.4 | : | : | 143.8 | 12.9 | 530.4 | 10.1 | 3.24 | 5.4 | 2.14 | 3.6 | 4.76 | 8.0 |
| 2002 | 596.1 | 11.3 | 242.0 | 406 | 255.6 | 25.6 | : | : | 147.7 | 13.4 | 533.5 | 10.1 | 3.13 | 5.2 | 2.13 | 3.6 | 4.99 | 8.3 |
| 2003 | 621.5 | 11.8 | 257.2 | 414 | 270.1 | 26.4 | : | : | 153.5 | 14.0 | 538.3 | 10.2 | 3.31 | 5.3 | 2.26 | 3.6 | 5.36 | 8.6 |
| 2004 | 639.7 | 12.1 | 269.7 | 422 | 273.1 | 26.1 | : | : | 153.4 | 14.1 | 512.5 | 9.7 | 3.22 | 5.0 | 2.21 | 3.5 | 5.39 | 8.4 |
| 2005 | 645.8 | 12.1 | 276.5 | 428 | 247.8 | 23.1 | 1.86[10] | 5.7[10] | 141.8 | 13.1 | 512.7 | 9.7 | 3.26 | 5.0 | 2.23 | 3.4 | 5.21 | 8.0 |
| 2006 | 669.6 | 12.5 | 291.4 | 435 | 237.0[P] | 21.6[P] | 14.94 | 1.4 | 132.6 | 12.2 | 502.6 | 9.4 | 3.37 | 5.0 | 2.35 | 3.5 | 5.36 | 8.0 |
| 2007 | 690.0 | 12.8 | 305.6 | 443 | .. | .. | 7.93 | 0.7[P] | 128.5[P] | 11.9[P] | 504.1 | 9.3 | 3.35 | 4.8 | 2.28 | 3.3 | 5.35[P] | 7.7 |
| 2006 March | 159.5 | 12.0 | 68.7 | 431 | 25.8[P] | 9.5[P] | 4.58 | 1.7 | 34.3 | 12.8 | 141.0 | 10.6 | 0.82 | 5.2 | 0.56 | 3.5 | 1.32 | 8.2 |
| June | 166.2 | 12.4 | 71.4 | 430 | 65.9[P] | 24.1[P] | 4.01 | 1.5 | 33.0 | 12.2 | 123.9 | 9.2 | 0.84 | 5.1 | 0.58 | 3.5 | 1.37 | 8.2 |
| Sept | 174.9 | 12.9 | 76.8 | 439 | 105.5[P] | 38.1[P] | 4.18 | 1.5 | 32.9 | 12.0 | 114.6 | 8.5 | 0.85 | 4.8 | 0.60 | 3.4 | 1.38 | 7.9 |
| Dec | 169.0 | 12.5 | 74.5 | 441 | 40.4[P] | 14.6[P] | 2.18 | 0.8 | 32.4 | 11.8 | 123.1 | 9.1 | 0.86 | 5.1 | 0.60 | 3.6 | 1.30 | 7.6 |
| 2007 March | 164.0 | 12.3 | 72.5 | 442 | .. | .. | 1.55 | 0.6[P] | 34.7[P] | 13.1[P] | 139.3 | 10.5 | 0.80 | 4.9 | 0.56 | 3.4 | 1.30 | 7.9 |
| June | 169.5 | 12.6 | 73.5 | 434 | .. | .. | 2.16 | 0.8[P] | 33.1[P] | 12.4[P] | 121.0 | 9.0 | 0.88 | 5.2 | 0.60 | 3.5 | 1.36 | 8.0 |
| Sept | 181.4 | 13.3 | 80.8 | 445 | .. | .. | 2.68 | 1.0[P] | 33.0[P] | 12.2[P] | 114.0 | 8.4 | 0.84 | 4.6 | 0.57 | 3.1 | 1.35 | 7.4 |
| Dec | 175.0 | 12.8 | 78.7 | 450 | .. | .. | 1.54 | 0.6[P] | 27.6[P] | 10.2[P] | 129.7 | 9.5 | 0.83 | 4.7 | 0.56 | 3.2 | 1.34 | 7.6 |
| 2008 March | 173.5[P] | 12.8[P] | 78.4[P] | 452[P] | .. | .. | 1.13[P] | 0.4[P] | 31.7[P] | 11.9[P] | 136.1[P] | 10.1[P] | 0.86[P] | 5.0[P] | 0.60[P] | 3.4[P] | 1.36[P] | 7.8[P] |
| June | 176.1[P] | 13.0[P] | 78.9[P] | 448[P] | .. | .. | .. | .. | .. | .. | 122.7[P] | 9.1[P] | 0.79[P] | 4.5[P] | 0.53[P] | 3.0[P] | 1.32[P] | 7.5[P] |
| **England** | | | | | | | | | | | | | | | | | | |
| 1976 | 550.4 | 11.8 | 50.8 | 92 | 339.0 | .. | : | : | .. | .. | 560.3 | 12.0 | 7.83 | 14.2 | 5.32 | 9.7 | 9.81 | 17.6 |
| 1981 | 598.2 | 12.8 | 76.9 | 129 | 332.2 | .. | : | : | .. | .. | 541.0 | 11.6 | 6.50 | 10.9 | 3.93 | 6.6 | 7.04 | 11.7 |
| 1986 | 623.6 | 13.2 | 133.5 | 214 | 328.4 | .. | : | : | 146.0 | .. | 544.5 | 11.6 | 5.92 | 9.5 | 3.27 | 5.2 | 5.98 | 9.5 |
| 1991 | 660.8 | 13.8 | 198:9 | 301 | 290.1 | .. | : | : | 150.1 | .. | 534.0 | 11.2 | 4.86 | 7.3 | 2.87 | 4.3 | 5.33 | 8.0 |
| 1996 | 614.2 | 12.7 | 218.2 | 355 | 264.2 | .. | : | : | 148.7 | .. | 524.0 | 10.8 | 3.74 | 6.1 | 2.53 | 4.1 | 5.36 | 8.7 |
| 1999 | 589.5 | 12.0 | 226.7 | 385 | 249.5 | .. | : | : | 137.0 | .. | 519.6 | 10.8 | 3.38 | 5.7 | 2.29 | 3.9 | 4.86 | 8.2 |
| 2000 | 572.8 | 11.7 | 223.8 | 391 | 253.8 | .. | : | : | 133.9 | .. | 501.0 | 10.2 | 3.18 | 5.6 | 2.21 | 3.9 | 4.69 | 8.2 |
| 2001 | 563.7 | 11.4 | 223.3 | 396 | 236.2 | .. | : | : | 136.4 | .. | 496.1 | 10.0 | 3.04 | 5.4 | 2.02 | 3.6 | 4.51 | 8.0 |
| 2002 | 565.7 | 11.4 | 227.0 | 401 | 242.1 | .. | : | : | 140.2 | .. | 499.1 | 10.1 | 2.97 | 5.2 | 2.02 | 3.6 | 4.75 | 8.3 |
| 2003 | 589.9 | 11.8 | 241.4 | 409 | 255.6 | .. | : | : | 145.8 | .. | 503.4 | 10.1 | 3.14 | 5.3 | 2.15 | 3.7 | 5.09 | 8.6 |
| 2004 | 607.2 | 12.1 | 253.1 | 417 | 258.2 | .. | : | : | 145.5 | .. | 479.2 | 9.6 | 3.03 | 5.0 | 2.09 | 3.4 | 5.10 | 8.4 |
| 2005 | 613.0 | 12.1 | 259.4 | 423 | 233.8 | .. | 1.79[10] | .. | 134.6 | .. | 479.4 | 9.6 | 3.10 | 5.0 | 2.12 | 3.5 | 4.92 | 8.0 |
| 2006 | 635.7 | 12.5 | 273.5 | 430 | 223.5[P] | .. | 14.38 | .. | 125.6 | .. | 470.3 | 9.3 | 3.19 | 5.0 | 2.24 | 3.5 | 5.11 | 8.0 |
| 2007 | 655.4 | 12.8 | 287.0 | 438[P] | .. | .. | 7.64 | .. | 121.9[P] | .. | 470.7 | 9.2 | 3.13 | 4.8 | 2.15 | 3.3 | 5.08 | 7.7 |
| 2006 March | 151.4 | 12.1 | 64.5 | 426 | 24.4[P] | .. | 4.42 | .. | 32.5 | .. | 132.0 | 10.5 | 0.79 | 5.2 | 0.54 | 3.6 | 1.26 | 8.3 |
| June | 157.8 | 12.5 | 67.0 | 425 | 62.1[P] | .. | 3.86 | .. | 31.2 | .. | 115.9 | 9.2 | 0.80 | 5.1 | 0.56 | 3.5 | 1.31 | 8.2 |
| Sept | 166.0 | 13.0 | 72.0 | 434 | 99.5[P] | .. | 4.02 | .. | 31.2 | .. | 107.1 | 8.4 | 0.80 | 4.8 | 0.57 | 3.4 | 1.31 | 7.8 |
| Dec | 160.5 | 12.5 | 70.0 | 436 | 38.2[P] | .. | 2.09 | .. | 30.7 | .. | 115.3 | 9.0 | 0.81 | 5.0 | 0.57 | 3.6 | 1.24 | 7.7 |
| 2007 March | 155.9 | 12.4 | 68.1 | 437 | .. | .. | 1.49 | .. | 32.9[P] | .. | 130.3 | 10.3 | 0.74 | 4.7 | 0.52 | 3.3 | 1.22 | 7.8 |
| June | 161.0 | 12.6 | 69.0 | 429 | .. | .. | 2.06 | .. | 31.4[P] | .. | 112.9 | 8.9 | 0.84 | 5.2 | 0.57 | 3.5 | 1.30 | 8.0 |
| Sept | 172.2 | 13.4 | 75.9 | 441 | .. | .. | 2.60 | .. | 31.4[P] | .. | 106.4 | 8.3 | 0.79 | 4.6 | 0.54 | 3.1 | 1.29 | 7.4 |
| Dec | 166.3 | 12.9 | 74.0 | 445 | .. | .. | 1.48 | .. | 26.2[P] | .. | 121.2 | 9.4 | 0.76 | 4.6 | 0.53 | 3.2 | 1.27 | 7.8 |
| 2008 March | 164.7[P] | 12.9[P] | 73.6[P] | 445[P] | .. | .. | 1.08[P] | .. | 30.1[P] | .. | 127.3[P] | 9.9[P] | 0.82[P] | 5.0[P] | 0.60[P] | 3.6[P] | 1.29[P] | 7.8[P] |
| June | 167.1[P] | 13.1[P] | 74.0[P] | 443[P] | .. | .. | .. | .. | .. | .. | 114.7[P] | 9.0[P] | 0.74[P] | 4.4[P] | 0.50[P] | 3.0[P] | 1.25[P] | 7.4[P] |

Note: Death figures for England and Wales represent the number of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993 to 2005. Death figures for 2006 and provisional death figures for 2007 relate to registrations.
Birth and death figures for England and also for Wales each exclude events for persons usually resident outside England and Wales. These events are, however, included in the totals for England and Wales combined, and for the United Kingdom.

From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and for the United Kingdom.
Infant, neonatal and perinatal mortality rates for Northern Ireland have now been amended to take account of the non-resident livebirths.
Rates for 2008 are based on 2006-based population projections for 2008. Marriage, civil partnership and divorce rates for 2007 and 2008 are based on 2006 marital status estimates.

**Table 2.1 continued** **Vital statistics summary**

Constituent countries of the United Kingdom

Numbers (thousands) and rates

| Year and quarter | All live births | | Live births outside marriage | | Marriages | | Civil Partnerships | | Divorces | | Deaths | | Infant mortality[6] | | Neonatal mortality[7] | | Perinatal mortality[8] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Rate[1] | Number | Rate[2] | Number | Rate[3] | Number | Rate[4] | Number | Rate[5] | Number | Rate[1] | Number | Rate[2] | Number | Rate[2] | Number | Rate[9] |
| **Wales** | | | | | | | | | | | | | | | | | | |
| 1976 | 33.4 | 11.9 | 2.9 | 86 | 19.5 | .. | : | : | .. | .. | 36.3 | 13.0 | 0.46 | 13.7 | 0.32 | 9.6 | 0.64 | 19.0 |
| 1981 | 35.8 | 12.7 | 4.0 | 112 | 19.8 | .. | : | : | .. | .. | 35.0 | 12.4 | 0.45 | 12.6 | 0.29 | 8.1 | 0.51 | 14.1 |
| 1986 | 37.0 | 13.2 | 7.8 | 211 | 19.5 | .. | : | : | 7.8 | .. | 34.7 | 12.3 | 0.35 | 9.5 | 0.21 | 5.6 | 0.38 | 10.3 |
| 1991 | 38.1 | 13.3 | 12.3 | 323 | 16.6 | .. | : | : | 8.4 | .. | 34.1 | 11.9 | 0.25 | 6.6 | 0.16 | 4.1 | 0.30 | 7.9 |
| 1996 | 34.9 | 12.1 | 14.4 | 412 | 14.8 | .. | : | : | 8.4 | .. | 34.6 | 12.0 | 0.20 | 5.6 | 0.13 | 3.6 | 0.26 | 7.5 |
| 1999 | 32.1 | 11.1 | 14.8 | 461 | 14.0 | .. | : | : | 7.5 | .. | 35.0 | 12.1 | 0.20 | 6.1 | 0.13 | 4.0 | 0.25 | 7.7 |
| 2000 | 31.3 | 10.8 | 14.8 | 472 | 14.1 | .. | : | : | 7.2 | .. | 33.3 | 11.5 | 0.17 | 5.3 | 0.11 | 3.5 | 0.23 | 7.2 |
| 2001 | 30.6 | 10.5 | 14.8 | 483 | 13.0 | .. | : | : | 7.4 | .. | 33.0 | 11.3 | 0.16 | 5.4 | 0.11 | 3.5 | 0.23 | 7.5 |
| 2002 | 30.2 | 10.3 | 15.0 | 497 | 13.5 | .. | : | : | 7.6 | .. | 33.2 | 11.4 | 0.14 | 4.5 | 0.10 | 3.2 | 0.24 | 7.7 |
| 2003 | 31.4 | 10.7 | 15.8 | 503 | 14.5 | .. | : | : | 7.7 | .. | 33.7 | 11.5 | 0.13 | 4.3 | 0.10 | 3.1 | 0.24 | 7.6 |
| 2004 | 32.3 | 11.0 | 16.6 | 513 | 14.9 | .. | : | : | 7.9 | .. | 32.1 | 10.9 | 0.16 | 4.9 | 0.10 | 3.1 | 0.26 | 8.0 |
| 2005 | 32.6 | 11.0 | 17.1 | 524 | 14.0 | .. | 0.07[10] | .. | 7.2 | .. | 32.1 | 10.9 | 0.13 | 4.1 | 0.09 | 2.9 | 0.24 | 7.4 |
| 2006 | 33.6 | 11.3 | 17.8 | 530 | 13.5[p] | .. | 0.56 | .. | 6.9 | .. | 31.1 | 10.5 | 0.14 | 4.1 | 0.09 | 2.8 | 0.23 | 6.9 |
| 2007 | 34.4 | 11.5 | 18.5 | 538 | .. | .. | 0.29 | .. | 6.7[p] | .. | 32.1 | 10.8 | 0.18 | 5.3 | 0.12 | 3.4 | 0.25 | 7.3 |
| 2006 March | 8.1 | 11.1 | 4.2 | 520 | 1.4[p] | .. | 0.16 | .. | 1.8 | .. | 8.7 | 11.9 | 0.03 | 3.1 | 0.02 | 2.0 | 0.06 | 7.0 |
| June | 8.3 | 11.2 | 4.3 | 523 | 3.8[p] | .. | 0.15 | .. | 1.7 | .. | 7.6 | 10.3 | 0.03 | 4.1 | 0.02 | 2.4 | 0.05 | 6.3 |
| Sept | 8.8 | 11.8 | 4.8 | 543 | 6.0[p] | .. | 0.16 | .. | 1.7 | .. | 7.2 | 9.7 | 0.04 | 4.0 | 0.03 | 3.1 | 0.07 | 7.7 |
| Dec | 8.4 | 11.2 | 4.5 | 535 | 2.2[p] | .. | 0.09 | .. | 1.7 | .. | 7.5 | 10.1 | 0.04 | 5.1 | 0.03 | 3.6 | 0.06 | 6.6 |
| 2007 March | 8.1 | 11.0 | 4.3 | 536 | .. | .. | 0.06 | .. | 1.8[p] | .. | 8.8 | 11.9[p] | 0.05 | 6.3 | 0.03 | 3.7 | 0.07 | 9.0 |
| June | 8.5 | 11.4 | 4.5 | 530 | .. | .. | 0.10 | .. | 1.8[p] | .. | 7.9 | 10.6[p] | 0.04 | 4.5 | 0.02 | 2.8 | 0.06 | 6.8 |
| Sept | 9.1 | 12.1 | 4.9 | 541 | .. | .. | 0.08 | .. | 1.7[p] | .. | 7.3 | 9.7[p] | 0.04 | 4.4 | 0.03 | 2.8 | 0.05 | 5.7 |
| Dec | 8.7 | 11.6 | 4.8 | 547 | .. | .. | 0.06 | .. | 1.4[p] | .. | 8.3 | 11.0[p] | 0.05 | 6.1 | 0.04 | 4.1 | 0.07 | 7.9 |
| 2008 March | 8.7[p] | 11.7[p] | 4.8[p] | 552[p] | .. | .. | 0.06[p] | .. | 1.6[p] | .. | 8.6[p] | 11.5[p] | 0.04[p] | 4.1[p] | 0.03[p] | 3.0[p] | 0.06[p] | 6.8[p] |
| June | 8.9[p] | 12.0[p] | 4.9[p] | 555[p] | .. | .. | .. | .. | .. | .. | 7.7[p] | 10.4[p] | 0.04[p] | 4.3[p] | 0.03[p] | 3.3[p] | 0.06[p] | 6.5[p] |
| **Scotland** | | | | | | | | | | | | | | | | | | |
| 1976 | 64.9 | 12.5 | 6.0 | 93 | 37.5 | 53.8 | : | : | 8.1 | 6.5 | 65.3 | 12.5 | 0.96 | 14.8 | 0.67 | 10.3 | 1.20 | 18.3 |
| 1981 | 69.1 | 13.4 | 8.5 | 122 | 36.2 | 47.5 | : | : | 9.9 | 8.0 | 63.8 | 12.3 | 0.78 | 11.3 | 0.47 | 6.9 | 0.81 | 11.6 |
| 1986 | 65.8 | 12.9 | 13.6 | 206 | 35.8 | 42.9 | : | : | 12.8 | 10.7 | 63.5 | 12.4 | 0.58 | 8.8 | 0.34 | 5.2 | 0.67 | 10.2 |
| 1991 | 67.0 | 13.2 | 19.5 | 291 | 33.8 | 39.0 | : | : | 12.4 | 10.6 | 61.0 | 12.0 | 0.47 | 7.1 | 0.29 | 4.6 | 0.58 | 8.6 |
| 1996 | 59.3 | 11.6 | 21.4 | 360 | 30.2 | 33.2 | : | : | 12.3 | 10.9 | 60.7 | 11.9 | 0.37 | 6.2 | 0.23 | 3.9 | 0.55 | 9.2 |
| 1999 | 55.1 | 10.9 | 22.7 | 412 | 29.9 | 31.5 | : | : | 11.9 | 10.9 | 60.3 | 11.9 | 0.28 | 5.0 | 0.18 | 3.3 | 0.42 | 7.6 |
| 2000 | 53.1 | 10.5 | 22.6 | 426 | 30.4 | 31.6 | : | : | 11.1 | 10.3 | 57.8 | 11.4 | 0.31 | 5.7 | 0.21 | 4.0 | 0.45 | 8.4 |
| 2001 | 52.5 | 10.4 | 22.8 | 433 | 29.6 | 31.0 | : | : | 10.6 | 9.7 | 57.4 | 11.3 | 0.29 | 5.5 | 0.20 | 3.8 | 0.45 | 8.5 |
| 2002 | 51.3 | 10.1 | 22.5 | 440 | 29.8 | 30.8 | : | : | 10.8 | 10.0 | 58.1 | 11.5 | 0.27 | 5.3 | 0.16 | 3.2 | 0.39 | 7.6 |
| 2003 | 52.4 | 10.4 | 23.9 | 455 | 30.8 | 31.3 | : | : | 10.1 | 10.2 | 58.5 | 11.6 | 0.27 | 5.1 | 0.18 | 3.4 | 0.42 | 8.0 |
| 2004 | 54.0 | 10.6 | 25.2 | 467 | 32.2 | 32.2 | : | : | 11.2 | 10.5 | 56.2 | 11.1 | 0.27 | 4.9 | 0.17 | 3.1 | 0.44 | 8.1 |
| 2005 | 54.4 | 10.7 | 25.6 | 471 | 30.9 | 30.3 | 0.08[10] | 2.5[10] | 10.9 | 10.3 | 55.7 | 11.0 | 0.28 | 5.2 | 0.19 | 3.5 | 0.42 | 7.7 |
| 2006 | 55.7 | 10.9 | 26.6 | 477 | 29.9 | 28.7 | 1.05 | 1.0 | 13.0 | 12.3 | 55.1 | 10.8 | 0.25 | 4.5 | 0.17 | 3.1 | 0.42 | 7.4 |
| 2007 | 57.8 | 11.2 | 28.4 | 491 | 29.9 | 28.7[p] | 0.69 | 0.7[p] | 12.8 | 12.1[p] | 56.0 | 10.9[p] | 0.27 | 4.7 | 0.19 | 3.2 | 0.45 | 7.8 |
| 2006 March | 13.6 | 10.8 | 6.6 | 487 | 3.5 | 13.6 | 0.26 | 1.0 | 2.6 | 10.1 | 14.9 | 11.8 | 0.05 | 3.7 | 0.03 | 2.4 | 0.09 | 6.7 |
| June | 14.0 | 11.0 | 6.7 | 475 | 8.3 | 32.1 | 0.32 | 1.2 | 3.1 | 11.7 | 13.9 | 10.9 | 0.07 | 5.0 | 0.05 | 3.3 | 0.09 | 6.4 |
| Sept | 14.2 | 11.0 | 6.7 | 471 | 12.2 | 46.4 | 0.28 | 1.1 | 3.6 | 13.4 | 12.7 | 9.8 | 0.05 | 3.8 | 0.04 | 2.9 | 0.11 | 7.8 |
| Dec | 13.9 | 10.8 | 6.6 | 477 | 5.9 | 22.4 | 0.19 | 0.7 | 3.7 | 14.1 | 13.6 | 10.6 | 0.07 | 5.3 | 0.04 | 3.7 | 0.12 | 8.7 |
| 2007 March | 14.2 | 11.2 | 7.1 | 501 | 3.3 | 13.0[p] | 0.11 | 0.4[p] | 33.2 | 12.7[p] | 15.8 | 12.5 | 0.07 | 4.9 | 0.05 | 3.6 | 0.12 | 8.1 |
| June | 14.3 | 11.1 | 6.9 | 482 | 8.1 | 31.4[p] | 0.18 | 0.7[p] | 33.4 | 12.7[p] | 13.4 | 10.4 | 0.08 | 5.3 | 0.05 | 3.4 | 0.12 | 8.6 |
| Sept | 14.9 | 11.5 | 7.2 | 485 | 12.6 | 48.1[p] | 0.25 | 0.9[p] | 30.3 | 11.4[p] | 12.6 | 9.7 | 0.07 | 4.6 | 0.05 | 3.0 | 0.11 | 7.1 |
| Dec | 14.4 | 11.1 | 7.1 | 497 | 5.8 | 22.0[p] | 0.15 | 0.6[p] | 30.9 | 11.6[p] | 14.2 | 10.9 | 0.06 | 3.9 | 0.04 | 2.9 | 0.11 | 7.5 |
| 2008 March | 15.1[p] | 11.8[p] | 7.7[p] | 509[p] | 3.4[p] | 13.4[p] | 0.10[p] | 0.4[p] | 27.4[p] | 10.5[p] | 15.1[p] | 11.8[p] | 0.06[p] | 3.9[p] | 0.04[p] | 2.8[p] | 0.11[p] | 7.0[p] |
| June | 14.9[p] | 11.6[p] | 7.3[p] | 488[p] | 7.9[p] | 30.5[p] | 0.11[p] | 0.4[p] | 29.2[p] | 11.5[p] | 13.5[p] | 10.5[p] | 0.06[p] | 4.0[p] | 0.04[p] | 2.5[p] | 0.11[p] | 7.5[p] |
| **Northern Ireland** | | | | | | | | | | | | | | | | | | |
| 1976 | 26.4 | 17.3 | 1.3 | 50 | 9.9 | .. | : | : | 0.6 | .. | 17.0 | 11.2 | 0.48 | 18.3 | 0.35 | 13.3 | 0.59 | 22.3 |
| 1981 | 27.2 | 17.6 | 1.9 | 70 | 9.6 | 45.4 | : | : | 1.4 | 4.2 | 16.3 | 10.6 | 0.36 | 13.2 | 0.23 | 8.3 | 0.42 | 15.3 |
| 1986 | 28.0 | 17.8 | 3.6 | 128 | 10.2 | .. | : | : | 1.5 | .. | 16.1 | 10.3 | 0.36 | 13.2 | 0.23 | 8.3 | 0.42 | 15.3 |
| 1991 | 26.0 | 16.2 | 5.3 | 203 | 9.2 | .. | : | : | 2.3 | .. | 15.1 | 9.4 | 0.19 | 7.4 | 0.12 | 4.6 | 0.22 | 8.4 |
| 1996 | 24.4 | 14.7 | 6.3 | 260 | 8.3 | .. | : | : | 2.3 | .. | 15.2 | 9.2 | 0.14 | 5.8 | 0.09 | 3.7 | 0.23 | 9.4 |
| 1999 | 23.0 | 13.7 | 7.0 | 303 | 7.6 | .. | : | : | 2.3 | .. | 15.7 | 9.3 | 0.15 | 6.4 | 0.11 | 4.8 | 0.23 | 10.0 |
| 2000 | 21.5 | 12.8 | 6.8 | 318 | 7.6 | .. | : | : | 2.4 | .. | 14.9 | 8.9 | 0.11 | 5.0 | 0.08 | 3.8 | 0.16 | 7.2 |
| 2001 | 22.0 | 13.0 | 7.1 | 325 | 7.3 | .. | : | : | 2.4 | .. | 14.5 | 8.6 | 0.13 | 6.0 | 0.10 | 4.5 | 0.19 | 8.4 |
| 2002 | 21.4 | 12.6 | 7.2 | 335 | 7.6 | .. | : | : | 2.2 | .. | 14.6 | 8.6 | 0.10 | 4.6 | 0.07 | 3.5 | 0.19 | 8.7 |
| 2003 | 21.6 | 12.7 | 7.4 | 344 | 7.8 | .. | : | : | 2.3 | .. | 14.5 | 8.5 | 0.12 | 5.2 | 0.09 | 4.0 | 0.18 | 8.0 |
| 2004 | 22.3 | 13.0 | 7.7 | 345 | 8.3 | .. | : | : | 2.5 | .. | 14.4 | 8.4 | 0.12 | 5.5 | 0.08 | 3.7 | 0.19 | 8.0 |
| 2005 | 22.3 | 12.9 | 8.1 | 363 | 8.1 | .. | 0.01[10] | .. | 2.4 | .. | 14.2 | 8.3 | 0.14 | 6.1 | 0.11 | 4.9 | 0.19 | 8.1 |
| 2006 | 23.3 | 13.4 | 8.8 | 380 | 8.3 | .. | 0.12 | .. | 2.6 | .. | 14.5 | 8.4 | 0.12 | 5.1 | 0.09 | 3.8 | 0.17 | 6.9 |
| 2007 | 24.5[p] | 13.9[p] | 9.3[p] | 379[p] | 8.7[p] | .. | 0.11[p] | .. | 2.9[p] | .. | 14.6[p] | 8.3[p] | 0.12[p] | 4.9[p] | 0.08[p] | 3.2[p] | 0.17[p] | 6.9[p] |
| 2006 March | 5.8 | 13.6 | 2.2 | 370 | 0.9 | .. | 0.03 | .. | 0.7 | .. | 4.0 | 9.4 | 0.03 | 5.2 | 0.02 | 3.2 | 0.04 | 6.7 |
| June | 5.8 | 13.3 | 2.2 | 381 | 2.3 | .. | 0.04 | .. | 0.7 | .. | 3.6 | 8.4 | 0.03 | 4.6 | 0.02 | 3.6 | 0.04 | 7.3 |
| Sept | 6.1 | 13.9 | 2.3 | 358 | 3.5 | .. | 0.03 | .. | 0.5 | .. | 3.4 | 7.8 | 0.03 | 4.8 | 0.02 | 3.5 | 0.05 | 7.4 |
| Dec | 5.6 | 12.8 | 2.2 | 393 | 1.5 | .. | 0.02 | .. | 0.6 | .. | 3.5 | 7.9 | 0.03 | 5.8 | 0.03 | 4.9 | 0.04 | 6.3 |
| 2007 March | 6.1[p] | 14.2[p] | 2.4[p] | 383[p] | 1.0[p] | .. | 0.02[p] | .. | 0.9[p] | .. | 4.2[p] | 9.7[p] | 0.04[p] | 6.7[p] | 0.03[p] | 4.6[p] | 0.05[p] | 7.6[p] |
| June | 6.0[p] | 13.7[p] | 2.2[p] | 365[p] | 2.4[p] | .. | 0.03[p] | .. | 0.7[p] | .. | 3.6[p] | 8.2[p] | 0.03[p] | 5.1[p] | 0.02[p] | 2.9[p] | 0.04[p] | 6.7[p] |
| Sept | 6.5[p] | 14.5[p] | 2.5[p] | 386[p] | 3.8[p] | .. | 0.04[p] | .. | 0.7[p] | .. | 3.3[p] | 7.3[p] | 0.03[p] | 4.6[p] | 0.02[p] | 3.2[p] | 0.05[p] | 7.0[p] |
| Dec | 5.9[p] | 13.2[p] | 2.2[p] | 380[p] | 1.6[p] | .. | 0.02[p] | .. | 0.6[p] | .. | 3.6[p] | 8.1[p] | 0.02[p] | 3.3[p] | 0.01[p] | 2.2[p] | 0.04[p] | 6.5[p] |
| 2008 March | 6.5[p] | 14.8[p] | 2.4[p] | 396[p] | 1.1[p] | .. | 0.02[p] | .. | .. | .. | 4.1[p] | 9.4[p] | 0.03[p] | 4.6[p] | 0.03[p] | 3.9[p] | 0.05[p] | 7.3[p] |
| June | 6.3[p] | 14.3[p] | 2.4[p] | 384[p] | 2.2[p] | .. | 0.02[p] | .. | .. | .. | 3.6[p] | 8.2[p] | 0.03[p] | 4.7[p] | 0.02[p] | 3.6[p] | 0.04[p] | 6.6[p] |

1 Per 1,000 population of all ages.
2 Per 1,000 live births.
3 Persons marrying per 1,000 unmarried population aged 16 and over.
4 Persons forming a civil partnership per 1,000 unmarried population aged 16 and over.
5 Persons divorcing per 1,000 married population.
6 Deaths under 1 year.
7 Deaths under 4 weeks.
8 Stillbirths and deaths under 1 week.
9 Per 1,000 live births and stillbirths.
10 The Civil Partnership Act 2004 came into force on 5 December 2005 in the UK - see Notes to tables.
p provisional

## Table 2.2 Key demographic and health indicators

Constituent countries of the United Kingdom

Numbers (thousands), rates, percentages, mean age

| Year and quarter | Population | Live births | Deaths | Dependency ratio: Children[1] | Dependency ratio: Elderly[2] | Live births: TFR[3] | Live births: Standardised mean age of mother at birth (years)[4] | Live births: Unstandardised mean age of mother at birth (years)[5] | Live births: Outside marriage as percentage of total live births | Age-standardised mortality rate[6] | Period expectation of life (in years) at birth[7]: Males | Period expectation of life (in years) at birth[7]: Females | Infant mortality rate[8] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **United Kingdom** | | | | | | | | | | | | | |
| 1976 | 56,216.1 | 675.5 | 680.8 | 42.1 | 29.5 | 1.74 | 26.7 | 26.4 | *9.0* | 10,486 | .. | .. | 14.5 |
| 1981 | 56,357.5 | 730.7 | 658.0 | 37.1 | 29.7 | 1.82 | 27.0 | 26.8 | *12.5* | 9,506 | 70.8 | 76.8 | 11.2 |
| 1986 | 56,683.8 | 754.8 | 660.7 | 33.5 | 29.7 | 1.78 | 27.4 | 27.0 | *20.4* | 8,914 | 71.9 | 77.7 | 9.5 |
| 1991 | 57,438.7 | 792.3 | 646.2 | 33.2 | 30.0 | 1.82 | 27.7 | 27.7 | *29.8* | 8,168 | 73.2 | 78.7 | 7.4 |
| 1996 | 58,164.4 | 733.2 | 636.0 | 33.9 | 30.0 | 1.73 | 28.2 | 28.6 | *35.5* | 7,584 | 74.2 | 79.4 | 6.1 |
| 2001 | 59,113.5 | 669.1 | 602.3 | 32.6 | 29.8 | 1.63 | 28.6 | 29.2 | *40.1* | 6,807 | 75.6 | 80.4 | 5.5 |
| 2002 | 59,323.5 | 668.8 | 606.2 | 32.2 | 29.8 | 1.64 | 28.7 | 29.3 | *40.6* | 6,765 | 75.9 | 80.5 | 5.2 |
| 2003 | 59,557.3 | 695.6 | 612.0 | 31.8 | 29.9 | 1.71 | 28.8 | 29.4 | *41.5* | 6,758 | 76.2 | 80.7 | 5.3 |
| 2004 | 59,845.8 | 716.0 | 583.1 | 31.4 | 30.0 | 1.77 | 28.9 | 29.4 | *42.3* | 6,394 | 76.5 | 80.9 | 5.0 |
| 2005 | 60,238.4 | 722.5 | 582.7 | 31.0 | 30.0 | 1.78 | 29.1 | 29.5 | *42.9* | 6,268 | 76.9 | 81.3 | 5.1 |
| 2006 | 60,587.3 | 748.6 | 572.2 | 30.6 | 30.1 | 1.84 | 29.1 | 29.5 | *43.7* | 6,067 | 77.2 | 81.5 | 5.0 |
| 2007 | 60,975.4 | 772.2[p] | 574.7 | 30.4 | 30.5 | 1.90[p] | 29.3[p] | 29.5[p] | *44.4*[p] | 5,966[p] | .. | .. | 4.8[p] |
| **England** | | | | | | | | | | | | | |
| 1976 | 46,659.9 | 550.4 | 560.3 | 41.4 | 29.7 | 1.70 | 26.5 | 26.4 | *9.2* | 10,271 | .. | .. | 14.2 |
| 1981 | 46,820.8 | 598.2 | 541.0 | 36.4 | 29.9 | 1.79 | 27.0 | 26.8 | *12.9* | 9,298 | 71.1 | 77.0 | 10.9 |
| 1986 | 47,187.6 | 623.6 | 544.5 | 33.1 | 29.8 | 1.76 | 27.4 | 27.0 | *21.4* | 8,725 | 72.2 | 77.9 | 9.5 |
| 1991 | 47,875.0 | 660.8 | 534.0 | 32.9 | 30.0 | 1.81 | 27.7 | 27.7 | *30.1* | 8,017 | 73.4 | 78.9 | 7.3 |
| 1996 | 48,519.1 | 614.2 | 524.0 | 33.7 | 30.0 | 1.73 | 28.2 | 28.7 | *35.5* | 7,414 | 74.5 | 79.6 | 6.1 |
| 2001 | 49,449.7 | 563.7 | 496.1 | 32.5 | 29.7 | 1.63 | 28.6 | 29.3 | *39.6* | 6,650 | 75.9 | 80.6 | 5.4 |
| 2002 | 49,652.3 | 565.7 | 499.1 | 32.1 | 29.7 | 1.65 | 28.7 | 29.4 | *40.1* | 6,603 | 76.1 | 80.7 | 5.2 |
| 2003 | 49,866.2 | 589.9 | 503.4 | 31.8 | 29.8 | 1.73 | 28.9 | 29.4 | *40.9* | 6,602 | 76.5 | 80.9 | 5.3 |
| 2004 | 50,110.7 | 607.2 | 479.2 | 31.4 | 29.8 | 1.78 | 29.0 | 29.5 | *41.7* | 6,232 | 76.8 | 81.1 | 5.0 |
| 2005 | 50,465.6 | 613.0 | 479.4 | 30.9 | 29.9 | 1.79 | 29.1 | 29.5 | *42.3* | 6,110 | 77.2 | 81.5 | 5.0 |
| 2006 | 50,762.9 | 635.7 | 470.3 | 30.6 | 29.9 | 1.86 | 29.2 | 29.5 | *43.0* | 5,916 | 77.5 | 81.7 | 5.0 |
| 2007 | 51,092.0 | 655.4 | 470.7 | 30.4 | 30.3 | 1.92 | 29.3 | 29.6 | *43.8* | 5,792 | .. | .. | 4.8 |
| **Wales** | | | | | | | | | | | | | |
| 1976 | 2,799.3 | 33.4 | 36.3 | 42.0 | 30.9 | 1.78 | 26.2 | 26.0 | *8.6* | 10,858 | .. | .. | 13.7 |
| 1981 | 2,813.5 | 35.8 | 35.0 | 37.6 | 31.6 | 1.87 | 26.7 | 26.6 | *11.2* | 9,846 | 70.4 | 76.4 | 12.6 |
| 1986 | 2,810.9 | 37.0 | 34.7 | 34.3 | 32.5 | 1.86 | 26.9 | 26.5 | *21.1* | 9,043 | 71.6 | 77.5 | 9.5 |
| 1991 | 2,873.0 | 38.1 | 34.1 | 34.4 | 33.5 | 1.88 | 27.1 | 27.0 | *32.3* | 8,149 | 73.1 | 78.8 | 6.6 |
| 1996 | 2,891.3 | 34.9 | 34.6 | 34.9 | 33.7 | 1.81 | 27.5 | 27.8 | *41.2* | 7,758 | 73.8 | 79.1 | 5.6 |
| 2001 | 2,910.2 | 30.6 | 33.0 | 33.7 | 33.6 | 1.66 | 27.8 | 28.3 | *48.3* | 7,017 | 75.3 | 80.0 | 5.4 |
| 2002 | 2,919.8 | 30.2 | 33.2 | 33.3 | 33.7 | 1.64 | 28.0 | 28.4 | *49.7* | 6,953 | 75.5 | 80.1 | 4.5 |
| 2003 | 2,931.1 | 31.4 | 33.7 | 32.8 | 33.8 | 1.73 | 28.1 | 28.5 | *50.3* | 6,984 | 75.8 | 80.3 | 4.3 |
| 2004 | 2,946.4 | 32.3 | 32.1 | 32.3 | 33.9 | 1.78 | 28.2 | 28.5 | *51.3* | 6,588 | 76.1 | 80.6 | 4.9 |
| 2005 | 2,953.6 | 32.6 | 32.1 | 31.8 | 34.1 | 1.81 | 28.4 | 28.5 | *52.4* | 6,442 | 76.6 | 80.9 | 4.1 |
| 2006 | 2,965.9 | 33.6 | 31.1 | 31.4 | 34.3 | 1.86 | 28.5 | 28.6 | *53.0* | 6,190 | 76.7 | 81.1 | 4.1 |
| 2007 | 2,980.0 | 34.4 | 32.1 | 31.0 | 34.9 | 1.90 | 28.6 | 28.6 | *53.8* | 6,307 | .. | .. | 5.3 |
| **Scotland** | | | | | | | | | | | | | |
| 1976 | 5,233.4 | 64.9 | 65.3 | 44.7 | 28.4 | 1.79 | 26.4 | 26.0 | *9.3* | 11,675 | .. | .. | 14.8 |
| 1981 | 5,180.2 | 69.1 | 63.8 | 38.2 | 28.4 | 1.84 | 26.8 | 26.3 | *12.2* | 10,849 | 69.1 | 75.3 | 11.3 |
| 1986 | 5,111.8 | 65.8 | 63.5 | 33.6 | 28.1 | 1.67 | 27.1 | 26.6 | *20.6* | 10,120 | 70.2 | 76.2 | 8.8 |
| 1991 | 5,083.3 | 67.0 | 61.0 | 32.4 | 28.9 | 1.69 | 27.5 | 27.4 | *29.1* | 9,216 | 71.4 | 77.1 | 7.1 |
| 1996 | 5,092.2 | 59.3 | 60.7 | 32.3 | 29.2 | 1.56 | 28.0 | 28.5 | *36.0* | 8,791 | 72.2 | 77.9 | 6.2 |
| 2001 | 5,064.2 | 52.5 | 57.4 | 30.8 | 30.0 | 1.49 | 28.5 | 29.2 | *43.3* | 7,930 | 73.3 | 78.8 | 5.5 |
| 2002 | 5,054.8 | 51.3 | 58.1 | 30.3 | 30.2 | 1.48 | 28.6 | 29.2 | *44.0* | 7,955 | 73.5 | 78.9 | 5.3 |
| 2003 | 5,057.4 | 52.4 | 58.5 | 29.9 | 30.3 | 1.54 | 28.7 | 29.3 | *45.5* | 7,921 | 73.8 | 79.1 | 5.1 |
| 2004 | 5,078.4 | 54.0 | 56.2 | 29.5 | 30.5 | 1.60 | 28.9 | 29.4 | *46.7* | 7,536 | 74.2 | 79.3 | 4.9 |
| 2005 | 5,094.8 | 54.4 | 55.7 | 29.1 | 30.6 | 1.62 | 29.0 | 29.5 | *47.1* | 7,349 | 74.6 | 79.6 | 5.2 |
| 2006 | 5,116.9 | 55.7 | 55.1 | 28.7 | 30.6 | 1.67 | 29.1 | 29.5 | *47.7* | 7,161 | 74.8 | 79.7 | 4.5 |
| 2007 | 5,144.2 | 57.8 | 56.0 | 28.4 | 31.0 | 1.73 | 29.2 | 29.4 | *49.1* | 7,150 | .. | .. | 4.7 |
| **Northern Ireland** | | | | | | | | | | | | | |
| 1976 | 1,523.5 | 26.4 | 17.0 | 56.1 | 25.3 | 2.68 | 27.8 | 27.4 | *5.0* | 11,746 | .. | .. | 18.3 |
| 1981 | 1,543.0 | 27.2 | 16.3 | 50.6 | 25.3 | 2.59 | 28.1 | 27.5 | *7.0* | 10,567 | 69.2 | 75.5 | 13.2 |
| 1986 | 1,573.5 | 28.0 | 16.1 | 46.1 | 25.5 | 2.45 | 28.1 | 27.5 | *12.8* | 10,071 | 70.9 | 77.1 | 13.2 |
| 1991 | 1,607.3 | 26.0 | 15.1 | 44.1 | 26.1 | 2.16 | 28.3 | 28.0 | *20.3* | 8,303 | 72.6 | 78.4 | 7.4 |
| 1996 | 1,661.8 | 24.4 | 15.2 | 41.8 | 25.5 | 1.95 | 28.7 | 28.8 | *26.0* | 7,742 | 73.8 | 79.2 | 5.8 |
| 2001 | 1,689.3 | 22.0 | 14.5 | 38.6 | 25.5 | 1.80 | 29.1 | 29.4 | *32.5* | 6,976 | 75.2 | 80.1 | 6.1 |
| 2002 | 1,696.6 | 21.4 | 14.6 | 37.9 | 25.7 | 1.77 | 29.2 | 29.5 | *33.5* | 6,930 | 75.6 | 80.4 | 4.7 |
| 2003 | 1,702.6 | 21.6 | 14.5 | 37.2 | 25.9 | 1.81 | 29.2 | 29.5 | *34.4* | 6,743 | 75.8 | 80.6 | 5.3 |
| 2004 | 1,710.3 | 22.3 | 14.4 | 36.4 | 26.2 | 1.87 | 29.4 | 29.7 | *34.5* | 6,609 | 76.0 | 80.8 | 5.5 |
| 2005 | 1,724.4 | 22.3 | 14.2 | 35.8 | 26.3 | 1.87 | 29.5 | 29.7 | *36.3* | 6,418 | 76.1 | 81.0 | 6.3 |
| 2006 | 1,741.6 | 23.3 | 14.5 | 35.3 | 26.4 | 1.94 | 29.6 | 29.7 | *38.0* | 6,397 | 76.2 | 81.2 | 5.1 |
| 2007 | 1,759.1 | 24.5[p] | 14.6[p] | 34.9 | 26.6 | 2.02[p] | 29.8[p] | 29.8[p] | *37.9*[p] | 6,321[p] | .. | .. | 4.9[p] |

Note: Death figures for England and Wales represent the number of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993 to 2005. Death figures for 2006 onwards relate to registrations.
Birth and death figures for England and also for Wales each exclude events for persons usually resident outside England and Wales. These events are, however, included in the total for the United Kingdom. From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and for the United Kingdom.
Period expectation of life data for the United Kingdom, England and for Wales for 2001 to 2005 is based on death registrations and revised population estimates for 2002 to 2005
Rates for 2007 are based on the 2007 population estimates published on 21 August 2008.

1 Percentage of children under 16 to working-age population (males 16–64 and females 16–59).
2 Percentage of males 65 and over and females 60 and over to working-age population (males 16–64 and females 16–59).
3 TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (total period fertility rate).
4 Standardised to take account of the age structure of the population.
5 Unstandardised and therefore takes no account of the age structure of the population.
6 Per million population. The age-standardised mortality rate makes allowances for changes in the age structure of the population. See Notes to tables.
7 All countries: figures for all years based on registered deaths. A minor methodological change was introduced for the 2006 figures to ensure consistency with population estimates of the very elderly for England and Wales. The effect on calculated life expectancies is marginal.
8 Deaths at age under one year per 1,000 live births.
p provisional

## Table 3.1 Live births: age of mother

England and Wales

Numbers (thousands), rates, mean age and TFRs

| Year and quarter | Age of mother at birth: All ages | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40 and over | Mean age[1] (years) | Age of mother at birth: All ages | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40 and over | Mean age[2] (years) | TFR[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total live births (numbers) | | | | | | | | Age-specific fertility rates[4] | | | | | | | | |
| 1961 | 811.3 | 59.8 | 249.8 | 248.5 | 152.3 | 77.5 | 23.3 | 27.6 | 89.2 | 37.3 | 172.6 | 176.9 | 103.1 | 48.1 | 15.0 | 27.4 | 2.77 |
| 1964(max) | 876.0 | 76.7 | 276.1 | 270.7 | 153.5 | 75.4 | 23.6 | 27.2 | 92.9 | 42.5 | 181.6 | 187.3 | 107.7 | 49.8 | 13.7 | 27.3 | 2.93 |
| 1966 | 849.8 | 86.7 | 285.8 | 253.7 | 136.4 | 67.0 | 20.1 | 26.8 | 90.5 | 47.7 | 176.0 | 174.0 | 97.3 | 45.3 | 12.5 | 27.1 | 2.75 |
| 1971 | 783.2 | 82.6 | 285.7 | 247.2 | 109.6 | 45.2 | 12.7 | 26.2 | 83.5 | 50.6 | 152.9 | 153.2 | 77.1 | 32.8 | 8.7 | 26.6 | 2.37 |
| 1976 | 584.3 | 57.9 | 182.2 | 220.7 | 90.8 | 26.1 | 6.5 | 26.4 | 60.4 | 32.2 | 109.3 | 118.7 | 57.2 | 18.6 | 4.8 | 26.5 | 1.71 |
| 1977(min) | 569.3 | 54.5 | 174.5 | 207.9 | 100.8 | 25.5 | 6.0 | 26.5 | 58.1 | 29.4 | 103.7 | 117.5 | 58.6 | 18.2 | 4.4 | 26.6 | 1.66 |
| 1981 | 634.5 | 56.6 | 194.5 | 215.8 | 126.6 | 34.2 | 6.9 | 26.8 | 61.3 | 28.1 | 105.3 | 129.1 | 68.6 | 21.7 | 4.9 | 27.0 | 1.79 |
| 1986 | 661.0 | 57.4 | 192.1 | 229.0 | 129.5 | 45.5 | 7.6 | 27.0 | 60.6 | 30.1 | 92.7 | 123.8 | 78.0 | 24.6 | 4.8 | 27.4 | 1.77 |
| 1991 | 699.2 | 52.4 | 173.4 | 248.7 | 161.3 | 53.6 | 9.8 | 27.7 | 63.6 | 33.0 | 89.3 | 119.4 | 86.7 | 32.1 | 5.3 | 27.7 | 1.82 |
| 1992 | 689.7 | 47.9 | 163.3 | 244.8 | 166.8 | 56.7 | 10.2 | 27.9 | 63.6 | 31.7 | 86.1 | 117.6 | 87.4 | 33.4 | 5.8 | 27.8 | 1.80 |
| 1993 | 673.5 | 45.1 | 152.0 | 236.0 | 171.1 | 58.8 | 10.5 | 28.1 | 62.7 | 30.9 | 82.5 | 114.4 | 87.4 | 34.1 | 6.2 | 27.9 | 1.76 |
| 1994 | 664.7 | 42.0 | 140.2 | 229.1 | 179.6 | 63.1 | 10.7 | 28.4 | 62.0 | 28.9 | 79.0 | 112.2 | 89.4 | 35.8 | 6.4 | 28.1 | 1.75 |
| 1995 | 648.1 | 41.9 | 130.7 | 217.4 | 181.2 | 65.5 | 11.3 | 28.5 | 60.5 | 28.5 | 76.4 | 108.4 | 88.3 | 36.3 | 6.8 | 28.2 | 1.72 |
| 1996 | 649.5 | 44.7 | 125.7 | 211.1 | 186.4 | 69.5 | 12.1 | 28.6 | 60.6 | 29.7 | 77.0 | 106.6 | 89.8 | 37.5 | 7.2 | 28.2 | 1.74 |
| 1997 | 643.1 | 46.4 | 118.6 | 202.8 | 187.5 | 74.9 | 12.9 | 28.8 | 60.0 | 30.2 | 76.0 | 104.3 | 89.8 | 39.4 | 7.6 | 28.3 | 1.73 |
| 1998 | 635.9 | 48.3 | 113.5 | 193.1 | 188.5 | 78.9 | 13.6 | 28.9 | 59.2 | 30.9 | 74.9 | 101.5 | 90.6 | 40.4 | 7.9 | 28.3 | 1.72 |
| 1999 | 621.9 | 48.4 | 110.7 | 181.9 | 185.3 | 81.3 | 14.3 | 29.0 | 57.8 | 30.9 | 73.0 | 98.3 | 89.6 | 40.6 | 8.1 | 28.4 | 1.70 |
| 2000 | 604.4 | 45.8 | 107.7 | 170.7 | 180.1 | 85.0 | 15.1 | 29.1 | 55.9 | 29.3 | 70.0 | 94.3 | 87.9 | 41.4 | 8.3 | 28.5 | 1.65 |
| 2001 | 594.6 | 44.2 | 108.8 | 159.9 | 178.9 | 86.5 | 16.3 | 29.2 | 54.7 | 28.0 | 69.0 | 91.7 | 88.0 | 41.5 | 8.8 | 28.6 | 1.63 |
| 2002 | 596.1 | 43.5 | 110.9 | 153.4 | 180.5 | 90.5 | 17.3 | 29.3 | 54.7 | 27.1 | 69.1 | 91.5 | 89.9 | 43.0 | 9.1 | 28.7 | 1.65 |
| 2003 | 621.5 | 44.2 | 116.6 | 156.9 | 187.2 | 97.4 | 19.1 | 29.4 | 56.8 | 26.9 | 71.3 | 95.8 | 94.9 | 46.4 | 9.8 | 28.8 | 1.73 |
| 2004 | 639.7 | 45.1 | 121.1 | 160.0 | 190.6 | 102.2 | 20.8 | 29.4 | 58.2 | 26.9 | 72.8 | 97.6 | 99.6 | 48.8 | 10.4 | 28.9 | 1.78 |
| 2005 | 645.8 | 44.8 | 122.1 | 164.3 | 188.2 | 104.1 | 22.2 | 29.5 | 58.3 | 26.3 | 71.6 | 97.9 | 100.7 | 50.3 | 10.8 | 29.1 | 1.79 |
| 2006 | 669.6 | 45.5 | 127.8 | 172.6 | 189.4 | 110.5 | 23.7 | 29.5 | 60.2 | 26.6 | 73.2 | 100.6 | 104.8 | 53.8 | 11.4 | 29.1 | 1.86 |
| 2007 | 690.0 | 44.8 | 130.8 | 182.6 | 191.1 | 115.4 | 25.4 | 29.5 | 62.0 | 26.0 | 73.5 | 104.0 | 110.2 | 56.9 | 12.0 | 29.3 | 1.92 |
| 2003 March | 147.4 | 10.9 | 27.9 | 37.5 | 44.0 | 22.6 | 4.6 | 29.3 | 54.7 | 26.8 | 69.1 | 92.8 | 90.5 | 43.7 | 9.6 | 28.8 | 1.66 |
| June | 155.1 | 10.7 | 28.5 | 39.3 | 47.4 | 24.5 | 4.7 | 29.5 | 56.9 | 26.0 | 70.0 | 96.4 | 96.4 | 46.9 | 9.6 | 28.9 | 1.73 |
| Sept | 162.8 | 11.5 | 30.5 | 41.0 | 49.3 | 25.6 | 5.0 | 29.4 | 59.1 | 27.7 | 74.0 | 99.4 | 99.2 | 48.3 | 10.1 | 28.9 | 1.79 |
| Dec | 156.0 | 11.2 | 29.7 | 39.1 | 46.5 | 24.6 | 4.8 | 29.4 | 56.6 | 27.1 | 72.1 | 94.6 | 93.6 | 46.5 | 9.8 | 28.8 | 1.72 |
| 2004 March | 155.2 | 11.0 | 29.3 | 38.7 | 46.6 | 24.7 | 4.9 | 29.4 | 56.8 | 26.5 | 70.8 | 95.0 | 97.9 | 47.4 | 9.8 | 28.9 | 1.74 |
| June | 157.4 | 10.7 | 29.3 | 39.4 | 47.7 | 25.2 | 5.0 | 29.5 | 57.6 | 25.7 | 70.9 | 96.6 | 100.4 | 48.5 | 10.1 | 29.0 | 1.76 |
| Sept | 165.4 | 11.7 | 31.4 | 41.6 | 49.0 | 26.3 | 5.4 | 29.4 | 59.9 | 27.7 | 75.0 | 101.0 | 102.0 | 50.1 | 10.7 | 28.9 | 1.83 |
| Dec | 161.7 | 11.6 | 31.1 | 40.3 | 47.2 | 26.0 | 5.5 | 29.4 | 58.5 | 27.6 | 74.3 | 97.7 | 98.2 | 49.4 | 10.9 | 28.9 | 1.79 |
| 2005 March | 154.3 | 10.9 | 29.3 | 38.9 | 45.0 | 24.7 | 5.4 | 29.4 | 56.5 | 26.0 | 69.6 | 94.0 | 97.6 | 48.5 | 10.7 | 29.0 | 1.74 |
| June | 159.8 | 10.7 | 29.6 | 40.3 | 47.5 | 26.2 | 5.4 | 29.5 | 57.8 | 25.3 | 69.7 | 96.2 | 101.9 | 50.8 | 10.6 | 29.1 | 1.78 |
| Sept | 170.2 | 11.9 | 32.5 | 43.7 | 49.4 | 26.9 | 5.7 | 29.4 | 60.9 | 27.6 | 75.7 | 103.2 | 104.9 | 51.6 | 11.1 | 29.0 | 1.88 |
| Dec | 161.7 | 11.3 | 30.7 | 41.4 | 46.3 | 26.3 | 5.7 | 29.4 | 57.9 | 26.3 | 71.3 | 97.9 | 98.3 | 50.4 | 11.0 | 29.0 | 1.78 |
| 2006 March | 159.5 | 11.1 | 30.5 | 40.7 | 45.3 | 26.3 | 5.6 | 29.5 | 58.2 | 26.3 | 70.9 | 96.1 | 101.6 | 52.0 | 11.0 | 29.1 | 1.79 |
| June | 166.2 | 11.4 | 31.2 | 42.9 | 47.6 | 27.1 | 5.9 | 29.5 | 60.0 | 26.6 | 71.8 | 100.4 | 105.7 | 53.0 | 11.3 | 29.1 | 1.85 |
| Sept | 174.9 | 12.0 | 33.5 | 45.6 | 49.0 | 28.9 | 6.0 | 29.4 | 62.4 | 27.7 | 76.1 | 105.4 | 107.5 | 55.9 | 11.4 | 29.1 | 1.93 |
| Dec | 169.0 | 11.1 | 32.6 | 43.5 | 47.5 | 28.1 | 6.2 | 29.5 | 60.3 | 25.7 | 74.0 | 100.5 | 104.3 | 54.4 | 11.8 | 29.2 | 1.86 |
| 2007 March | 164.0 | 10.9 | 31.1 | 42.7 | 45.7 | 27.4 | 6.2 | 29.5 | 59.8 | 25.5 | 70.9 | 98.6 | 106.9 | 54.8 | 12.0 | 29.3 | 1.85 |
| June | 169.5 | 10.7 | 31.4 | 44.6 | 47.8 | 28.9 | 6.2 | 29.6 | 61.1 | 25.0 | 70.8 | 101.9 | 110.5 | 57.1 | 11.8 | 29.4 | 1.89 |
| Sept | 181.4 | 11.9 | 34.6 | 48.6 | 50.0 | 29.9 | 6.4 | 29.5 | 64.7 | 27.3 | 77.1 | 109.9 | 114.4 | 58.6 | 12.0 | 29.2 | 2.00 |
| Dec | 175.0 | 11.3 | 33.7 | 46.6 | 47.6 | 29.2 | 6.6 | 29.5 | 62.4 | 26.1 | 75.0 | 105.4 | 108.9 | 57.1 | 12.4 | 29.3 | 1.93 |
| 2008 March | 173.5[p] | 11.1[p] | 33.4[p] | 46.7[p] | 47.2[p] | 28.8[p] | 6.4[p] | 29.5[p] | 62.6[p] | 26.1[p] | 73.5[p] | 103.2[p] | 110.7[p] | 58.1[p] | 12.3[p] | 29.3[p] | 1.92[p] |
| June | 176.1[p] | 10.9[p] | 33.2[p] | 48.1[p] | 48.2[p] | 29.1[p] | 6.5[p] | 29.5[p] | 63.5[p] | 25.7[p] | 73.1[p] | 106.5[p] | 113.2[p] | 58.7[p] | 12.5[p] | 29.4[p] | 1.95[p] |

Note: The rates for women of all ages, under 20, and 40 and over are based upon the populations of women aged 15–44, 15–19, and 40–44 respectively.
Rates for 2008 are based on 2006-based population projections for 2008.

1 Unstandardised and therefore takes no account of the age structure of the population.

2 Standardised to take account of the age structure of the population. This measure is more appropriate for use when analysing trends or making comparisons between different geographies.

3 TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (total period fertility rate).

4 Births per 1,000 women in the age-group; all quarterly age-specific fertility rates are adjusted for days in the quarter. They are not adjusted for seasonality.

p provisional.

## Table 3.2 Live births outside marriage: age of mother and type of registration

England and Wales

Numbers (thousands), mean age and percentages

| Year and quarter | Age of mother at birth: All ages | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40 and over | Mean age[1] (years) | Age of mother at birth: All ages | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40 and over | Registration[2]: Joint: Same[3] address | Joint: Different[3] address | Sole |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Live births outside marriage (numbers) | | | | | | | | Percentage of total live births in age group | | | | | | | As a percentage of all births outside marriage | | |
| 1971 | 65.7 | 21.6 | 22.0 | 11.5 | 6.2 | 3.2 | 1.1 | 23.7 | *8.4* | *26.1* | *7.7* | *4.7* | *5.7* | *7.0* | *9.0* | *45.5* | | *54.5* |
| 1976 | 53.8 | 19.8 | 16.6 | 9.7 | 4.7 | 2.3 | 0.7 | 23.3 | *9.2* | *34.2* | *9.1* | *4.4* | *5.2* | *8.6* | *10.1* | *51.0* | | *49.0* |
| 1981 | 81.0 | 26.4 | 28.8 | 14.3 | 7.9 | 1.3 | 0.9 | 23.4 | *12.8* | *46.7* | *14.8* | *6.6* | *6.2* | *3.9* | *12.5* | *58.2* | | *41.8* |
| 1986 | 141.3 | 39.6 | 54.1 | 27.7 | 13.1 | 5.7 | 1.1 | 23.8 | *21.4* | *69.0* | *28.2* | *12.1* | *10.1* | *12.6* | *14.7* | *46.6* | *19.6* | *33.8* |
| 1991 | 211.3 | 43.4 | 77.8 | 52.4 | 25.7 | 9.8 | 2.1 | 24.8 | *30.2* | *82.9* | *44.9* | *21.1* | *16.0* | *18.3* | *21.3* | *54.6* | *19.8* | *25.6* |
| 1992 | 215.2 | 40.1 | 77.1 | 55.9 | 28.9 | 10.9 | 2.3 | 25.2 | *31.2* | *83.7* | *47.2* | *22.8* | *17.3* | *19.3* | *22.9* | *55.4* | *20.7* | *23.9* |
| 1993 | 216.5 | 38.2 | 75.0 | 57.5 | 31.4 | 11.9 | 2.5 | 25.5 | *32.2* | *84.8* | *49.4* | *24.4* | *18.4* | *20.2* | *23.5* | *54.8* | *22.0* | *23.2* |
| 1994 | 215.5 | 35.9 | 71.0 | 58.5 | 34.0 | 13.4 | 2.7 | 25.8 | *32.4* | *85.5* | *50.6* | *25.5* | *18.9* | *21.2* | *25.2* | *57.5* | *19.8* | *22.7* |
| 1995 | 219.9 | 36.3 | 69.7 | 59.6 | 37.0 | 14.4 | 3.0 | 26.0 | *33.9* | *86.6* | *53.3* | *27.4* | *20.4* | *22.0* | *26.2* | *58.1* | *20.1* | *21.8* |
| 1996 | 232.7 | 39.3 | 71.1 | 62.3 | 40.5 | 16.2 | 3.2 | 26.1 | *35.8* | *88.0* | *56.5* | *29.5* | *21.7* | *23.4* | *26.7* | *58.1* | *19.9* | *21.9* |
| 1997 | 238.2 | 41.1 | 69.5 | 63.4 | 42.2 | 18.2 | 3.7 | 26.2 | *37.0* | *88.7* | *58.6* | *31.3* | *22.5* | *24.3* | *28.6* | *59.5* | *19.3* | *21.2* |
| 1998 | 240.6 | 43.0 | 67.8 | 62.4 | 43.9 | 19.6 | 3.9 | *26.3* | *37.8* | *89.1* | *59.7* | *32.3* | *23.3* | *24.8* | *29.0* | *60.9* | *18.3* | *20.8* |
| 1999 | 241.9 | 43.0 | 67.5 | 61.2 | 45.0 | 20.8 | 4.3 | *26.4* | *38.9* | *89.0* | *61.0* | *33.6* | *24.3* | *25.6* | *30.2* | *61.8* | *18.2* | *19.9* |
| 2000 | 238.6 | 41.1 | 67.5 | 59.1 | 43.9 | 22.3 | 4.7 | *26.5* | *39.5* | *89.7* | *62.6* | *34.6* | *24.4* | *26.2* | *31.0* | *62.7* | *18.2* | *19.2* |
| 2001 | 238.1 | 39.5 | 68.1 | 56.8 | 45.2 | 23.3 | 5.1 | 26.7 | *40.0* | *89.5* | *62.6* | *35.5* | *25.3* | *26.9* | *31.6* | *63.2* | *18.4* | *18.4* |
| 2002 | 242.0 | 38.9 | 70.2 | 55.8 | 46.4 | 25.1 | 5.6 | 26.8 | *40.6* | *89.5* | *63.3* | *36.4* | *25.7* | *27.7* | *32.2* | *63.7* | *18.5* | *17.8* |
| 2003 | 257.2 | 39.9 | 75.7 | 58.2 | 49.2 | 27.8 | 6.4 | 26.9 | *41.4* | *90.2* | *64.9* | *37.1* | *26.3* | *28.5* | *33.3* | *63.5* | *19.0* | *17.4* |
| 2004 | 269.7 | 41.0 | 79.8 | 61.4 | 50.7 | 29.7 | 7.1 | 27.0 | *42.2* | *91.0* | *65.9* | *38.4* | *26.6* | *29.0* | *34.0* | *63.6* | *19.6* | *16.8* |
| 2005 | 276.5 | 41.2 | 82.1 | 64.4 | 50.8 | 30.3 | 7.7 | 27.0 | *42.8* | *91.8* | *67.2* | *39.2* | *27.0* | *29.1* | *34.8* | *63.5* | *20.2* | *16.3* |
| 2006 | 291.4 | 42.3 | 87.7 | 69.3 | 51.4 | 32.2 | 8.4 | 27.0 | *43.5* | *93.0* | *68.6* | *40.1* | *27.1* | *29.2* | *35.5* | *63.7* | *20.8* | *15.6* |
| 2007 | 305.6 | 41.7 | 91.9 | 76.0 | 53.0 | 34.0 | 9.0 | 27.1 | *44.3* | *93.1* | *70.3* | *41.6* | *27.7* | *29.5* | *35.5* | *65.0* | *20.1* | *15.0* |
| 2002 March | 58.0 | 9.4 | 16.7 | 13.6 | 10.9 | 6.0 | 1.3 | 26.8 | *40.5* | *89.4* | *63.0* | *36.4* | *25.4* | *27.7* | *31.5* | *63.2* | *18.5* | *18.3* |
| June | 58.3 | 9.3 | 16.6 | 13.5 | 11.4 | 6.1 | 1.4 | 26.8 | *39.6* | *89.4* | *62.2* | *35.6* | *25.0* | *27.2* | *31.7* | *64.2* | *18.2* | *17.7* |
| Sept | 63.4 | 10.2 | 18.4 | 14.6 | 12.3 | 6.5 | 1.5 | 26.8 | *40.9* | *89.3* | *63.8* | *36.6* | *26.1* | *27.9* | *32.7* | *63.9* | *18.5* | *17.5* |
| Dec | 62.3 | 10.0 | 18.4 | 14.1 | 11.9 | 6.5 | 1.5 | 26.8 | *41.4* | *89.7* | *64.1* | *36.9* | *26.4* | *28.0* | *32.8* | *63.3* | *18.9* | *17.8* |
| 2003 March | 61.0 | 9.8 | 18.0 | 13.9 | 11.6 | 6.3 | 1.5 | 26.8 | *41.4* | *90.1* | *64.5* | *37.0* | *26.9* | *29.1* | *33.3* | *63.0* | *18.9* | *18.1* |
| June | 62.8 | 9.6 | 18.3 | 14.2 | 12.2 | 6.9 | 1.6 | 27.0 | *40.5* | *90.0* | *64.0* | *36.2* | *25.7* | *28.3* | *33.7* | *64.0* | *18.5* | *17.4* |
| Sept | 67.6 | 10.3 | 20.0 | 15.3 | 13.0 | 7.3 | 1.7 | 26.9 | *41.5* | *90.2* | *65.6* | *38.3* | *26.4* | *28.6* | *33.3* | *63.7* | *19.3* | *18.0* |
| Dec | 65.8 | 10.2 | 19.5 | 14.9 | 12.5 | 7.3 | 1.6 | 26.9 | *42.2* | *90.4* | *65.6* | *38.0* | *27.7* | *29.5* | *32.9* | *63.3* | *19.4* | *17.4* |
| 2004 March | 65.2 | 10.1 | 19.3 | 14.8 | 12.5 | 7.0 | 1.7 | 26.9 | *42.0* | *91.2* | *65.8* | *38.2* | *26.8* | *28.2* | *34.3* | *63.1* | *19.4* | *17.4* |
| June | 65.2 | 9.8 | 19.1 | 14.9 | 12.5 | 7.3 | 1.7 | 27.0 | *41.4* | *91.0* | *65.1* | *37.7* | *26.2* | *28.8* | *34.5* | *63.9* | *19.5* | *16.6* |
| Sept | 70.2 | 10.7 | 20.7 | 16.1 | 13.0 | 7.9 | 1.8 | 27.0 | *42.4* | *91.2* | *66.1* | *38.6* | *26.5* | *30.0* | *33.5* | *63.7* | *19.7* | *16.6* |
| Dec | 69.1 | 10.6 | 20.7 | 15.7 | 12.7 | 7.5 | 1.9 | 26.9 | *42.7* | *90.6* | *66.6* | *39.0* | *27.0* | *29.0* | *33.9* | *63.6* | *19.8* | *16.6* |
| 2005 March | 66.3 | 10.1 | 19.6 | 15.2 | 12.2 | 7.3 | 1.9 | 27.0 | *43.0* | *92.0* | *67.0* | *39.0* | *27.1* | *29.6* | *35.2* | *63.1* | *20.3* | *16.6* |
| June | 66.6 | 9.8 | 19.7 | 15.4 | 12.5 | 7.4 | 1.8 | 27.0 | *41.7* | *91.2* | *66.5* | *38.2* | *26.4* | *28.1* | *33.5* | *63.7* | *19.8* | *16.5* |
| Sept | 73.7 | 10.9 | 22.1 | 17.3 | 13.4 | 7.9 | 2.1 | 26.9 | *43.3* | *92.0* | *68.0* | *39.6* | *27.2* | *29.3* | *35.7* | *63.7* | *20.3* | *16.0* |
| Dec | 69.9 | 10.4 | 20.7 | 16.5 | 12.6 | 7.7 | 2.0 | 27.0 | *43.2* | *92.1* | *67.4* | *39.8* | *27.3* | *29.5* | *34.8* | *63.5* | *20.3* | *16.2* |
| 2006 March | 68.7 | 10.3 | 20.8 | 16.0 | 12.0 | 7.6 | 1.9 | 26.9 | *43.1* | *93.1* | *68.1* | *39.4* | *26.5* | *28.9* | *34.4* | *63.1* | *20.9* | *16.0* |
| June | 71.4 | 10.5 | 21.2 | 16.9 | 12.8 | 7.8 | 2.1 | 27.0 | *43.0* | *92.6* | *68.0* | *39.4* | *26.9* | *28.8* | *35.0* | *63.7* | *20.6* | *15.6* |
| Sept | 76.8 | 11.1 | 23.1 | 18.6 | 13.4 | 8.4 | 2.2 | 27.0 | *43.9* | *92.8* | *69.0* | *40.7* | *27.3* | *29.2* | *36.9* | *64.1* | *20.5* | *15.4* |
| Dec | 74.5 | 10.3 | 22.6 | 17.8 | 13.2 | 8.4 | 2.2 | 27.1 | *44.1* | *93.3* | *69.2* | *40.9* | *27.8* | *29.8* | *35.7* | *63.6* | *21.0* | *15.4* |
| 2007 March | 72.5 | 10.2 | 21.7 | 17.6 | 12.6 | 8.2 | 2.2 | 27.1 | *44.2* | *93.5* | *69.8* | *41.3* | *27.5* | *29.8* | *35.1* | *64.0* | *20.5* | *15.5* |
| June | 73.5 | 9.9 | 21.8 | 18.3 | 13.0 | 8.3 | 2.2 | 27.1 | *43.4* | *92.6* | *69.5* | *41.0* | *27.2* | *28.8* | *35.2* | *65.1* | *19.9* | *14.9* |
| Sept | 80.8 | 11.1 | 24.4 | 20.4 | 13.9 | 8.8 | 2.2 | 27.0 | *44.5* | *93.2* | *70.5* | *41.9* | *27.8* | *29.6* | *35.0* | *65.2* | *20.1* | *14.7* |
| Dec | 78.7 | 10.6 | 24.0 | 19.7 | 13.5 | 8.7 | 2.4 | 27.1 | *45.0* | *93.1* | *71.3* | *42.2* | *28.3* | *29.6* | *36.5* | *65.3* | *19.9* | *14.8* |
| 2008 March | 78.4[p] | 10.4[p] | 23.8[p] | 20.0[p] | 13.4[p] | 8.6[p] | 2.3[p] | 27.1[p] | *45.2*[p] | *94.3*[p] | *71.2*[p] | *42.8*[p] | *28.4*[p] | *29.8*[p] | *35.6*[p] | *65.3*[p] | *20.0*[p] | *14.7*[p] |
| June | 78.9[p] | 10.2[p] | 23.7[p] | 20.4[p] | 13.7[p] | 8.5[p] | 2.3[p] | 27.1[p] | *44.8*[p] | *93.4*[p] | *71.3*[p] | *42.4*[p] | *28.5*[p] | *29.4*[p] | *35.7*[p] | *66.0*[p] | *19.8*[p] | *14.2*[p] |

1 Unstandardised and therefore takes no account of the age structure of the population.
2 Births outside marriage can be registered by both the mother and father (joint) or by the mother alone (sole).
3 Usual address(es) of parents.
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## Table 4.1 Conceptions: age of woman at conception

England and Wales (residents)

Numbers (thousands) and rates; and percentage terminated by abortion

| Year and quarter | Age of woman at conception | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All ages | Under 16 | Under 18 | Under 20 | 20–24 | 25–29 | 30–34 | 35–39 | 40 and over |
| **(a) numbers (thousands)** | | | | | | | | | |
| 1991 | 853.7 | 7.5 | 40.1 | 101.6 | 233.3 | 281.5 | 167.5 | 57.6 | 12.1 |
| 1996 | 816.9 | 8.9 | 43.5 | 94.9 | 179.8 | 252.6 | 200.0 | 75.5 | 14.1 |
| 1999 | 774.0 | 7.9 | 42.0 | 98.8 | 157.6 | 218.5 | 197.1 | 86.0 | 16.0 |
| 2000 | 767.0 | 8.1 | 41.3 | 97.7 | 159.0 | 209.3 | 195.3 | 88.7 | 17.0 |
| 2001 | 763.7 | 7.9 | 41.0 | 96.0 | 161.6 | 199.3 | 196.7 | 92.2 | 17.8 |
| 2002 | 787.0 | 7.9 | 42.0 | 97.1 | 167.8 | 199.4 | 204.3 | 98.9 | 19.6 |
| 2003 | 806.8 | 8.0 | 42.2 | 98.6 | 175.3 | 199.8 | 209.0 | 103.1 | 20.9 |
| 2004 | 826.8 | 7.6 | 42.2 | 101.3 | 181.3 | 205.1 | 209.6 | 106.8 | 22.8 |
| 2005 | 841.8 | 7.9 | 42.3 | 102.3 | 185.5 | 211.3 | 209.2 | 110.0 | 23.6 |
| 2006 | 870.0 | 7.8 | 41.8 | 103.1 | 191.2 | 222.2 | 212.4 | 115.4 | 25.5 |
| 2004 March | 207.9 | 2.0 | 10.9 | 26.2 | 45.9 | 51.1 | 52.6 | 26.6 | 5.6 |
| June | 200.1 | 1.9 | 10.6 | 25.0 | 43.7 | 49.3 | 50.4 | 25.9 | 5.7 |
| Sept | 203.6 | 1.8 | 10.0 | 24.0 | 44.1 | 50.7 | 52.7 | 26.6 | 5.6 |
| Dec | 215.2 | 1.9 | 10.8 | 26.1 | 47.7 | 54.0 | 54.0 | 27.6 | 5.8 |
| 2005 March | 204.6 | 1.9 | 10.4 | 25.1 | 45.4 | 50.8 | 51.0 | 26.6 | 5.7 |
| June | 204.7 | 2.0 | 10.5 | 25.1 | 45.2 | 51.0 | 50.7 | 26.9 | 5.8 |
| Sept | 210.9 | 2.0 | 10.4 | 25.3 | 45.6 | 53.3 | 53.1 | 27.5 | 6.0 |
| Dec | 221.7 | 2.0 | 11.0 | 26.8 | 49.3 | 56.2 | 54.3 | 29.1 | 6.0 |
| 2006 March | 214.0 | 1.8 | 10.2 | 25.4 | 47.5 | 54.2 | 52.4 | 28.3 | 6.2 |
| June | 212.6 | 2.1 | 10.6 | 25.7 | 46.9 | 53.8 | 51.4 | 28.3 | 6.5 |
| Sept | 215.1 | 2.0 | 10.0 | 24.7 | 46.3 | 55.3 | 53.6 | 28.9 | 6.4 |
| Dec | 228.2 | 2.0 | 11.0 | 27.3 | 50.6 | 58.9 | 55.1 | 29.9 | 6.5 |
| 2007 March[1,p] | 220.6 | 2.0 | 10.7 | 26.4 | 48.8 | 56.3 | 52.0 | 28.9 | 6.4 |
| June[1,p] | 220.1 | 2.1 | 10.9 | 26.7 | 48.9 | 56.9 | 51.5 | 28.7 | 6.5 |
| Sept[1,p] | 222.0 | 2.0 | 10.3 | 25.5 | 48.1 | 58.3 | 52.4 | 29.5 | 6.6 |
| **(b) rates (conceptions per thousand women in age group)** | | | | | | | | | |
| 1991 | 77.7 | 8.9 | 44.6 | 64.1 | 120.2 | 135.1 | 90.1 | 34.4 | 6.6 |
| 1996 | 76.2 | 9.5 | 46.3 | 63.2 | 110.1 | 127.6 | 96.3 | 40.7 | 8.4 |
| 1999 | 71.9 | 8.3 | 45.1 | 63.1 | 103.9 | 118.0 | 95.3 | 42.9 | 9.1 |
| 2000 | 70.9 | 8.3 | 43.9 | 62.5 | 103.2 | 115.7 | 95.3 | 43.2 | 9.4 |
| 2001 | 70.3 | 8.0 | 42.7 | 60.8 | 102.5 | 114.2 | 96.7 | 44.3 | 9.6 |
| 2002 | 72.2 | 7.9 | 42.9 | 60.6 | 104.4 | 119.0 | 101.7 | 47.0 | 10.3 |
| 2003 | 73.7 | 7.9 | 42.4 | 60.0 | 107.2 | 122.0 | 106.0 | 49.1 | 10.7 |
| 2004 | 75.2 | 7.5 | 41.8 | 60.3 | 109.0 | 125.1 | 109.6 | 51.0 | 11.4 |
| 2005 | 76.0 | 7.8 | 41.4 | 60.1 | 108.7 | 125.8 | 112.0 | 53.2 | 11.5 |
| 2006 | 78.3 | 7.8 | 40.9 | 60.2 | 109.5 | 129.5 | 117.5 | 56.3 | 12.3 |
| 2004 March | 76.2 | 7.8 | 43.5 | 63.2 | 111.5 | 125.4 | 109.3 | 51.1 | 11.4 |
| June | 73.2 | 7.7 | 42.2 | 60.1 | 105.9 | 121.1 | 105.5 | 49.7 | 11.5 |
| Sept | 73.6 | 7.1 | 39.2 | 56.8 | 105.0 | 122.6 | 109.9 | 50.6 | 11.1 |
| Dec | 77.7 | 7.4 | 42.4 | 61.5 | 112.9 | 129.9 | 113.2 | 52.8 | 11.4 |
| 2005 March | 75.1 | 7.6 | 41.5 | 60.0 | 108.9 | 123.8 | 109.8 | 51.8 | 11.4 |
| June | 74.2 | 8.0 | 41.1 | 59.1 | 106.7 | 122.1 | 108.5 | 52.0 | 11.4 |
| Sept | 75.5 | 7.8 | 40.5 | 59.0 | 105.7 | 125.6 | 113.3 | 52.8 | 11.7 |
| Dec | 79.3 | 7.9 | 42.8 | 62.4 | 113.6 | 131.7 | 116.7 | 55.9 | 11.5 |
| 2006 March | 78.2 | 7.1 | 40.4 | 60.3 | 111.2 | 129.2 | 116.2 | 55.7 | 12.2 |
| June | 76.7 | 8.2 | 41.4 | 60.3 | 108.1 | 126.1 | 113.6 | 55.3 | 12.5 |
| Sept | 76.8 | 7.7 | 38.8 | 57.2 | 104.8 | 127.4 | 118.1 | 56.0 | 12.1 |
| Dec | 81.4 | 8.1 | 42.8 | 63.0 | 114.1 | 134.9 | 122.4 | 58.2 | 12.3 |
| 2007 March[1,2,p] | 80.4 | 8.0 | 42.6 | 62.4 | 111.9 | 130.7 | 119.1 | 57.6 | 12.5 |
| June[1,2,p] | 79.3 | 8.7 | 42.7 | 62.4 | 110.2 | 129.8 | 117.8 | 56.7 | 12.4 |
| Sept[1,2,p] | 79.1 | 8.2 | 39.9 | 58.7 | 106.9 | 131.1 | 120.1 | 57.8 | 12.5 |
| **(c) percentage terminated by abortion** | | | | | | | | | |
| 1991 | *19.4* | *51.1* | *39.9* | *34.5* | *22.2* | *13.4* | *13.7* | *22.0* | *41.6* |
| 1996 | *20.8* | *49.2* | *40.0* | *36.2* | *25.7* | *15.6* | *14.1* | *21.2* | *37.6* |
| 1999 | *22.6* | *52.6* | *43.0* | *38.6* | *28.5* | *17.5* | *14.7* | *21.2* | *37.0* |
| 2000 | *22.7* | *54.0* | *44.2* | *39.3* | *29.2* | *17.7* | *14.5* | *20.5* | *35.4* |
| 2001 | *23.2* | *55.8* | *45.7* | *40.4* | *29.7* | *18.4* | *14.6* | *20.4* | *34.6* |
| 2002 | *22.5* | *55.6* | *45.3* | *39.9* | *28.8* | *17.9* | *13.9* | *19.5* | *34.6* |
| 2003 | *22.5* | *57.4* | *45.7* | *40.2* | *29.0* | *17.9* | *13.6* | *18.9* | *34.7* |
| 2004 | *22.4* | *57.2* | *45.6* | *40.1* | *28.9* | *18.2* | *13.2* | *18.3* | *33.0* |
| 2005 | *22.2* | *57.1* | *46.3* | *40.3* | *28.6* | *18.0* | *13.2* | *17.7* | *32.8* |
| 2006 | *22.3* | *59.8* | *48.4* | *41.9* | *28.7* | *18.0* | *13.1* | *17.1* | *31.8* |
| 2004 March | *22.7* | *58.2* | *45.7* | *40.2* | *29.4* | *18.5* | *13.4* | *18.2* | *32.9* |
| June | *23.0* | *57.2* | *46.3* | *40.8* | *29.2* | *18.6* | *13.7* | *19.2* | *33.5* |
| Sept | *21.9* | *56.8* | *45.8* | *40.0* | *28.4* | *17.9* | *12.8* | *17.8* | *33.0* |
| Dec | *22.0* | *56.3* | *44.5* | *39.3* | *28.6* | *17.8* | *13.0* | *18.2* | *32.5* |
| 2005 March | *22.5* | *57.5* | *47.3* | *41.1* | *29.2* | *18.1* | *13.1* | *18.0* | *32.6* |
| June | *22.7* | *57.0* | *45.8* | *40.3* | *28.9* | *18.6* | *13.9* | *17.8* | *33.8* |
| Sept | *21.4* | *56.2* | *45.3* | *39.0* | *27.5* | *17.5* | *12.6* | *17.2* | *32.1* |
| Dec | *22.2* | *57.5* | *46.9* | *40.6* | *28.7* | *17.8* | *13.1* | *17.7* | *32.7* |
| 2006 March | *22.5* | *59.0* | *47.7* | *41.6* | *29.1* | *18.4* | *13.0* | *17.5* | *31.1* |
| June | *23.1* | *59.5* | *49.0* | *42.5* | *29.6* | *18.8* | *13.9* | *17.8* | *31.6* |
| Sept | *21.5* | *60.4* | *48.0* | *41.3* | *27.7* | *17.5* | *12.7* | *16.3* | *32.8* |
| Dec | *22.0* | *60.2* | *49.1* | *42.0* | *28.3* | *17.4* | *12.8* | *16.9* | *31.7* |
| 2007 March[1,p] | *22.7* | *62.7* | *50.9* | *43.4* | *29.7* | *18.5* | *13.1* | *17.0* | *31.4* |
| June[1,p] | *22.6* | *62.1* | *50.5* | *43.4* | *28.8* | *18.2* | *12.9* | *17.1* | *31.9* |
| Sept[1,p] | *21.1* | *58.0* | *48.8* | *41.6* | *27.2* | *16.7* | *12.4* | *16.2* | *31.1* |

Note: Conception figures are estimates derived from birth registrations and abortion notifications.
Rates for women of all ages, under 16, under 18, under 20 and 40 and over are based on the population of women aged 15–44, 13–15, 15–17, 15–19 and 40–44 respectively.
For a quarterly analysis of conceptions to women under 18 for local authority areas see the National Statistics website, www.statistics.gov.uk

1 Figures for conceptions by age for the March, June and September quarters of 2007 exclude maternities where the mother's age was not recorded.

2 Conception rates for March and June quarters of 2007 are calculated using 2006-based population projections for 2007. Rates for September quarter of 2007 are calculated using mid-year population estimates for 2007. All rates will be updated using 2007 population estimates when final annual 2007 conception figures are released.

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## Table 4.2 Abortions: residents and non-residents; age and gestation (residents only)

England and Wales

Numbers (thousands) and rates; and percentages for gestation weeks

| Year and quarter | All ages: All[1] women | All ages: Residents[1] | All ages: Non-[1] residents | All women (residents): Age group: Under 16 | 16–19 | 20–24 | 25–29 | 30–34 | 35–44 | 45 and over | Gestation weeks (percentages): Under 9 | 9–12 | 13–19 | 20 and over |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Numbers (thousands)** | | | | | | | | | | **Percentages** | | | |
| 1971 | 126.8 | 94.6 | 32.2 | 2.3 | 18.2 | 24.5 | 17.3 | 14.2 | 15.9 | 0.5 | *16.6* | *57.9* | *21.8* | *1.0* |
| 1976 | 129.7 | 101.9 | 27.8 | 3.4 | 24.0 | 23.6 | 19.3 | 14.6 | 14.7 | 0.5 | *24.8* | *55.8* | *15.0* | *1.1* |
| 1981 | 162.5 | 128.6 | 33.9 | 3.5 | 31.4 | 34.3 | 21.9 | 18.7 | 17.6 | 0.6 | *31.0* | *53.4* | *13.5* | *1.3* |
| 1986 | 172.3 | 147.6 | 24.7 | 3.9 | 33.8 | 45.3 | 28.7 | 18.0 | 17.5 | 0.4 | *33.4* | *53.8* | *11.5* | *1.4* |
| 1991 | 179.5 | 167.4 | 12.1 | 3.2 | 31.1 | 52.7 | 38.6 | 23.4 | 17.9 | 0.4 | *35.2* | *52.9* | *10.6* | *1.2* |
| 1996 | 177.5 | 167.9 | 9.6 | 3.6 | 28.8 | 46.4 | 39.3 | 28.2 | 21.1 | 0.4 | *40.0* | *48.7* | *10.1* | *1.3* |
| 1997 | 179.7 | 170.1 | 9.6 | 3.4 | 29.9 | 45.0 | 40.2 | 28.9 | 22.3 | 0.5 | *41.2* | *47.9* | *9.6* | *1.2* |
| 1998 | 187.4 | 177.9 | 9.5 | 3.8 | 33.2 | 45.8 | 40.4 | 30.4 | 23.8 | 0.5 | *41.4* | *47.6* | *9.7* | *1.3* |
| 1999 | 183.2 | 173.7 | 9.5 | 3.6 | 32.8 | 45.0 | 38.5 | 29.1 | 24.1 | 0.5 | *42.5* | *46.5* | *9.5* | *1.4* |
| 2000 | 185.4 | 175.5 | 9.8 | 3.7 | 33.2 | 47.1 | 37.9 | 28.7 | 24.4 | 0.5 | *43.3* | *45.0* | *10.3* | *1.5* |
| 2001 | 186.3 | 176.4 | 9.9 | 3.7 | 33.4 | 48.3 | 36.5 | 28.8 | 25.2 | 0.5 | *42.8* | *45.0* | *10.6* | *1.6* |
| 2002 | 185.4 | 175.9 | 9.5 | 3.7 | 33.0 | 48.4 | 35.8 | 28.5 | 26.0 | 0.5 | *42.2* | *45.2* | *11.0* | *1.6* |
| 2003 | 190.7 | 181.6 | 9.1 | 4.0 | 34.2 | 51.1 | 36.0 | 28.7 | 26.9 | 0.5 | *43.6* | *43.7* | *11.1* | *1.6* |
| 2004 | 194.5 | 185.7 | 8.8 | 3.8 | 35.5 | 52.8 | 37.8 | 28.1 | 27.3 | 0.5 | *46.2* | *41.5* | *10.8* | *1.6* |
| 2005 | 194.4 | 186.4 | 7.9 | 3.8 | 35.3 | 53.3 | 38.3 | 27.8 | 27.2 | 0.6 | *53.6* | *35.7* | *9.3* | *1.4* |
| 2006 | 201.2 | 193.7 | 7.4 | 4.0 | 37.3 | 55.3 | 40.4 | 28.2 | 27.9 | 0.7 | *54.9* | *34.3* | *9.2* | *1.5* |
| 2007 | 205.6 | 198.5 | 7.1 | 4.4 | 39.6 | 57.0 | 41.7 | 27.3 | 27.9 | 0.7 | *57.9* | *31.9* | *8.8* | *1.5* |
| 2003 March | 50.0 | 47.6 | 2.4 | 1.0 | 9.1 | 13.4 | 9.4 | 7.5 | 7.0 | 0.1 | *40.9* | *45.3* | *12.2* | *1.6* |
| June | 47.7 | 45.4 | 2.3 | 1.0 | 8.5 | 12.7 | 9.1 | 7.2 | 6.7 | 0.1 | *42.5* | *44.4* | *11.4* | *1.6* |
| Sept | 47.7 | 44.8 | 2.3 | 1.0 | 8.3 | 12.5 | 8.9 | 7.2 | 6.7 | 0.1 | *43.3* | *43.9* | *11.2* | *1.5* |
| Dec | 46.0 | 43.9 | 2.1 | 0.9 | 8.3 | 12.5 | 8.6 | 6.9 | 6.5 | 0.1 | *47.7* | *41.0* | *9.6* | *1.7* |
| 2004 March | 51.1 | 48.7 | 2.4 | 1.0 | 9.4 | 13.9 | 9.8 | 7.5 | 7.0 | 0.1 | *41.7* | *44.5* | *12.1* | *1.7* |
| June | 48.9 | 46.6 | 2.3 | 1.0 | 8.9 | 13.3 | 9.5 | 6.9 | 6.9 | 0.1 | *43.6* | *43.3* | *11.2* | *1.8* |
| Sept | 48.4 | 46.3 | 2.1 | 1.0 | 8.9 | 13.0 | 9.4 | 7.0 | 6.9 | 0.1 | *47.8* | *40.5* | *10.3* | *1.4* |
| Dec | 46.1 | 44.2 | 1.9 | 1.0 | 8.4 | 12.6 | 9.1 | 6.6 | 6.5 | 0.1 | *52.0* | *37.2* | *9.5* | *1.3* |
| 2005 March | 50.1 | 47.9 | 2.1 | 0.9 | 9.1 | 13.9 | 9.7 | 7.2 | 7.0 | 0.1 | *47.2* | *40.4* | *11.0* | *1.4* |
| June | 50.1 | 48.0 | 2.1 | 1.0 | 9.2 | 13.9 | 9.9 | 7.1 | 6.9 | 0.1 | *53.8* | *35.6* | *9.2* | *1.4* |
| Sept | 47.0 | 45.1 | 1.9 | 1.0 | 8.5 | 12.7 | 9.3 | 6.9 | 6.7 | 0.1 | *56.5* | *33.6* | *8.5* | *1.3* |
| Dec | 47.2 | 45.3 | 1.8 | 0.9 | 8.6 | 12.9 | 9.5 | 6.7 | 6.7 | 0.1 | *57.2* | *32.9* | *8.3* | *1.5* |
| 2006 March | 52.4 | 50.4 | 2.0 | 1.0 | 9.8 | 14.6 | 10.4 | 7.2 | 7.3 | 0.2 | *50.6* | *37.3* | *10.5* | *1.6* |
| June | 51.3 | 49.3 | 2.0 | 1.0 | 9.4 | 14.2 | 10.3 | 7.2 | 7.1 | 0.2 | *53.6* | *35.3* | *9.4* | *1.7* |
| Sept | 49.8 | 47.9 | 1.8 | 1.0 | 9.2 | 13.6 | 10.0 | 7.0 | 6.9 | 0.2 | *56.5* | *33.0* | *9.0* | *1.5* |
| Dec | 47.7 | 46.0 | 1.6 | 1.0 | 8.8 | 13.0 | 9.6 | 6.7 | 6.7 | 0.1 | *59.5* | *31.3* | *7.9* | *1.3* |
| 2007 March | 55.3 | 53.3 | 1.9 | 1.2 | 10.8 | 15.4 | 11.1 | 7.3 | 7.4 | 0.2 | 54.1 | 35.0 | 9.4 | 1.6 |
| June | 51.2 | 49.4 | 1.8 | 1.1 | 9.9 | 14.3 | 10.3 | 6.7 | 6.8 | 0.2 | 56.6 | 32.6 | 9.2 | 1.5 |
| Sept | 49.9 | 48.2 | 1.7 | 1.0 | 9.5 | 13.5 | 10.2 | 6.6 | 7.0 | 0.2 | 58.6 | 31.2 | 8.8 | 1.4 |
| Dec | 49.2 | 47.6 | 1.6 | 1.1 | 9.4 | 13.7 | 10.0 | 6.6 | 6.7 | 0.2 | 62.7 | 28.3 | 7.6 | 1.4 |
| 2008 March[p] | 53.3 | 51.5 | 1.8 | 1.1 | 10.5 | 14.7 | 10.8 | 7.0 | 7.1 | 0.2 | 58.4 | 31.0 | 9.0 | 1.6 |
| June[p] | 51.7 | 49.9 | 1.9 | 1.0 | 9.9 | 14.4 | 10.7 | 6.8 | 6.9 | 0.2 | 60.8 | 29.4 | 8.3 | 1.4 |
| **Rates (per thousand women residents)** | ASR[2] (women 15–44) | Crude rate[3] (women 15–44) | | | | | | | | | | | | |
| 1971 | 9.9 | 10.1 | : | 2.3 | 13.9 | 13.1 | 10.7 | 10.0 | 5.6 | 0.3 | | | | |
| 1976 | 10.2 | 10.5 | : | 2.9 | 16.9 | 14.2 | 10.4 | 9.2 | 5.3 | 0.3 | | | | |
| 1981 | 11.9 | 12.4 | : | 3.0 | 19.4 | 18.6 | 13.1 | 10.1 | 5.9 | 0.4 | | | | |
| 1986 | 13.0 | 13.5 | : | 3.7 | 22.0 | 21.9 | 15.5 | 10.8 | 5.1 | 0.3 | | | | |
| 1991 | 15.0 | 15.2 | : | 3.8 | 24.0 | 27.1 | 18.5 | 12.6 | 5.1 | 0.3 | | | | |
| 1996 | 16.0 | 15.7 | : | 3.9 | 24.2 | 28.4 | 19.9 | 13.6 | 6.0 | 0.2 | | | | |
| 1997 | 16.3 | 15.9 | : | 3.7 | 24.4 | 28.8 | 20.7 | 13.8 | 6.2 | 0.3 | | | | |
| 1998 | 17.1 | 16.6 | : | 4.0 | 26.8 | 30.2 | 21.2 | 14.6 | 6.5 | 0.3 | | | | |
| 1999 | 16.8 | 16.2 | : | 3.8 | 26.3 | 29.7 | 20.8 | 14.1 | 6.4 | 0.3 | | | | |
| 2000 | 17.0 | 16.3 | : | 3.9 | 26.9 | 30.7 | 20.9 | 14.1 | 6.3 | 0.3 | | | | |
| 2001 | 17.0 | 16.2 | : | 3.7 | 26.6 | 30.6 | 20.9 | 14.2 | 6.4 | 0.3 | | | | |
| 2002 | 17.0 | 16.1 | : | 3.7 | 25.8 | 30.1 | 21.4 | 14.2 | 6.5 | 0.3 | | | | |
| 2003 | 17.5 | 16.6 | : | 3.9 | 26.1 | 31.2 | 22.1 | 14.6 | 6.6 | 0.3 | | | | |
| 2004 | 17.8 | 16.9 | : | 3.7 | 26.5 | 31.9 | 23.3 | 14.7 | 6.7 | 0.3 | | | | |
| 2005 | 17.8 | 17.0 | : | 3.7 | 26.3 | 32.0 | 23.6 | 14.5 | 6.6 | 0.3 | | | | |
| 2006 | 18.3 | 17.5 | : | 3.9 | 27.3 | 32.5 | 24.3 | 15.1 | 6.8 | 0.4 | | | | |
| 2007 | 18.6 | 17.9 | : | 4.4 | 28.9 | 32.6 | 24.3 | 15.1 | 6.7 | 0.4 | | | | |
| 2003 March | 18.3 | 17.4 | : | 4.0 | 28.0 | 33.0 | 22.9 | 15.1 | 6.9 | 0.3 | | | | |
| June | 17.4 | 16.6 | : | 4.0 | 26.1 | 31.1 | 22.3 | 14.5 | 6.6 | 0.3 | | | | |
| Sept | 17.2 | 16.4 | : | 4.0 | 25.3 | 30.6 | 21.8 | 14.6 | 6.6 | 0.3 | | | | |
| Dec | 16.8 | 16.0 | : | 3.7 | 25.2 | 30.4 | 21.1 | 14.2 | 6.4 | 0.3 | | | | |
| 2004 March | 18.7 | 17.8 | : | 3.9 | 28.3 | 33.8 | 24.1 | 15.4 | 6.9 | 0.3 | | | | |
| June | 17.9 | 17.0 | : | 3.8 | 26.7 | 32.3 | 23.3 | 14.4 | 6.7 | 0.3 | | | | |
| Sept | 17.8 | 16.9 | : | 3.7 | 26.6 | 31.5 | 23.0 | 14.8 | 6.8 | 0.3 | | | | |
| Dec | 17.0 | 16.2 | : | 3.5 | 25.0 | 30.4 | 22.3 | 14.2 | 6.3 | 0.3 | | | | |
| 2005 March | 18.4 | 17.5 | : | 3.7 | 27.0 | 33.5 | 23.8 | 15.2 | 6.8 | 0.3 | | | | |
| June | 18.4 | 17.5 | : | 3.8 | 27.2 | 33.3 | 24.1 | 15.3 | 6.7 | 0.3 | | | | |
| Sept | 17.3 | 16.4 | : | 3.8 | 25.2 | 30.5 | 22.6 | 14.8 | 6.5 | 0.3 | | | | |
| Dec | 17.4 | 16.5 | : | 3.6 | 25.4 | 30.9 | 23.0 | 14.4 | 6.5 | 0.3 | | | | |
| 2006 March | 19.3 | 18.4 | : | 3.9 | 29.0 | 34.8 | 25.0 | 15.9 | 7.0 | 0.3 | | | | |
| June | 18.9 | 18.0 | : | 3.9 | 27.8 | 33.8 | 24.7 | 16.0 | 6.8 | 0.4 | | | | |
| Sept | 18.3 | 17.5 | : | 4.0 | 27.0 | 32.2 | 23.9 | 15.9 | 6.7 | 0.4 | | | | |
| Dec | 17.5 | 16.8 | : | 4.0 | 25.9 | 30.8 | 22.8 | 15.3 | 6.5 | 0.3 | | | | |
| 2007 March | 20.0 | 19.2 | : | 4.7 | 31.4 | 35.3 | 25.6 | 16.7 | 7.2 | 0.4 | | | | |
| June | 18.5 | 17.8 | : | 4.4 | 28.8 | 32.7 | 23.7 | 15.5 | 6.6 | 0.4 | | | | |
| Sept | 18.0 | 17.4 | : | 4.2 | 27.7 | 30.8 | 23.3 | 15.4 | 6.8 | 0.4 | | | | |
| Dec | 17.8 | 17.2 | : | 4.4 | 27.2 | 31.1 | 22.7 | 15.3 | 6.5 | 0.4 | | | | |
| 2008 March[p] | 19.3 | 18.6 | : | 4.6 | 30.4 | 33.2 | 24.3 | 16.5 | 7.0 | 0.4 | | | | |
| June[p] | 18.6 | 18.0 | : | 4.3 | 28.9 | 32.2 | 23.9 | 16.0 | 6.7 | 0.3 | | | | |

Notes: Rates for under 16 and 45 and over are based on female populations aged 13–15 and 45–49 respectively.
1 Includes cases with not stated age and/or gestation week.
2 Rates for all women residents age-standardised to the European population for ages 15–44.
3 Includes incomplete forms that have been returned to practitioners.
p provisional

## Table 5.1 Period expectation of life at birth and selected age

Constituent countries of the United Kingdom

Years

| Year | Males | | | | | | | | Year | Females | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | At birth | At age | | | | | | | | At birth | At age | | | | | | |
| | | 5 | 20 | 30 | 50 | 60 | 70 | 80 | | | 5 | 20 | 30 | 50 | 60 | 70 | 80 |
| **United Kingdom** | | | | | | | | | | | | | | | | | |
| 1981 | 70.8 | 66.9 | 52.3 | 42.7 | 24.1 | 16.3 | 10.1 | 5.8 | 1981 | 76.8 | 72.7 | 57.9 | 48.2 | 29.2 | 20.8 | 13.3 | 7.5 |
| 1986 | 71.9 | 67.8 | 53.2 | 43.6 | 24.9 | 16.8 | 10.5 | 6.0 | 1986 | 77.7 | 73.4 | 58.6 | 48.8 | 29.8 | 21.2 | 13.8 | 7.8 |
| 1991 | 73.2 | 68.9 | 54.2 | 44.7 | 26.0 | 17.7 | 11.1 | 6.4 | 1991 | 78.7 | 74.3 | 59.5 | 49.7 | 30.6 | 21.9 | 14.3 | 8.2 |
| 1996 | 74.2 | 69.8 | 55.1 | 45.6 | 26.9 | 18.5 | 11.6 | 6.6 | 1996 | 79.4 | 74.9 | 60.1 | 50.3 | 31.2 | 22.3 | 14.5 | 8.3 |
| 2000 | 75.3 | 70.9 | 56.1 | 46.6 | 28.0 | 19.5 | 12.3 | 7.0 | 2000 | 80.1 | 75.6 | 60.8 | 51.0 | 31.9 | 23.0 | 15.0 | 8.6 |
| 2001 | 75.6 | 71.2 | 56.4 | 46.9 | 28.2 | 19.7 | 12.5 | 7.1 | 2001 | 80.4 | 75.8 | 61.0 | 51.2 | 32.1 | 23.2 | 15.1 | 8.7 |
| 2002 | 75.9 | 71.4 | 56.6 | 47.1 | 28.5 | 19.9 | 12.6 | 7.1 | 2002 | 80.5 | 75.9 | 61.1 | 51.3 | 32.2 | 23.3 | 15.2 | 8.7 |
| 2003 | 76.2 | 71.7 | 56.9 | 47.4 | 28.7 | 20.2 | 12.8 | 7.3 | 2003 | 80.7 | 76.1 | 61.3 | 51.5 | 32.4 | 23.4 | 15.3 | 8.7 |
| 2004 | 76.5 | 72.0 | 57.3 | 47.7 | 29.0 | 20.5 | 13.1 | 7.4 | 2004 | 80.9 | 76.4 | 61.5 | 51.7 | 32.6 | 23.6 | 15.5 | 8.8 |
| 2005 | 76.9 | 72.4 | 57.6 | 48.0 | 29.4 | 20.8 | 13.4 | 7.6 | 2005 | 81.3 | 76.7 | 61.9 | 52.0 | 32.9 | 23.9 | 15.8 | 9.0 |
| 2006 | 77.2 | 72.7 | 57.9 | 48.3 | 29.6 | 21.1 | 13.6 | 7.7 | 2006 | 81.5 | 76.9 | 62.0 | 52.2 | 33.1 | 24.1 | 15.9 | 9.1 |
| **England and Wales** | | | | | | | | | | | | | | | | | |
| 1981 | 71.0 | 67.1 | 52.5 | 42.9 | 24.3 | 16.4 | 10.1 | 5.8 | 1981 | 77.0 | 72.9 | 58.1 | 48.3 | 29.4 | 20.9 | 13.4 | 7.5 |
| 1986 | 72.1 | 68.0 | 53.4 | 43.8 | 25.0 | 16.9 | 10.5 | 6.1 | 1986 | 77.9 | 73.6 | 58.8 | 49.0 | 30.0 | 21.4 | 13.9 | 7.9 |
| 1991 | 73.4 | 69.1 | 54.4 | 44.8 | 26.1 | 17.8 | 11.2 | 6.4 | 1991 | 78.9 | 74.5 | 59.7 | 49.9 | 30.8 | 22.0 | 14.4 | 8.3 |
| 1996 | 74.5 | 70.1 | 55.3 | 45.8 | 27.1 | 18.6 | 11.6 | 6.6 | 1996 | 79.6 | 75.1 | 60.2 | 50.4 | 31.3 | 22.5 | 14.6 | 8.4 |
| 2000 | 75.6 | 71.1 | 56.4 | 46.8 | 28.1 | 19.6 | 12.3 | 7.0 | 2000 | 80.3 | 75.8 | 60.9 | 51.1 | 32.0 | 23.1 | 15.1 | 8.6 |
| 2001 | 75.9 | 71.4 | 56.7 | 47.1 | 28.4 | 19.9 | 12.5 | 7.1 | 2001 | 80.5 | 76.0 | 61.2 | 51.3 | 32.2 | 23.3 | 15.2 | 8.7 |
| 2002 | 76.1 | 71.6 | 56.9 | 47.3 | 28.6 | 20.1 | 12.7 | 7.2 | 2002 | 80.7 | 76.1 | 61.3 | 51.5 | 32.3 | 23.4 | 15.3 | 8.7 |
| 2003 | 76.4 | 71.9 | 57.2 | 47.6 | 28.9 | 20.3 | 12.9 | 7.3 | 2003 | 80.9 | 76.3 | 61.5 | 51.7 | 32.5 | 23.6 | 15.4 | 8.8 |
| 2004 | 76.8 | 72.3 | 57.5 | 47.9 | 29.2 | 20.6 | 13.2 | 7.4 | 2004 | 81.1 | 76.6 | 61.7 | 51.9 | 32.7 | 23.8 | 15.6 | 8.9 |
| 2005 | 77.2 | 72.7 | 57.9 | 48.3 | 29.6 | 21.0 | 13.5 | 7.6 | 2005 | 81.5 | 76.9 | 62.0 | 52.2 | 33.1 | 24.1 | 15.9 | 9.1 |
| 2006 | 77.4 | 72.9 | 58.2 | 48.5 | 29.8 | 21.2 | 13.7 | 7.7 | 2006 | 81.7 | 77.1 | 62.2 | 52.4 | 33.2 | 24.3 | 16.0 | 9.2 |
| **England** | | | | | | | | | | | | | | | | | |
| 1981 | 71.1 | 67.1 | 52.5 | 42.9 | 24.3 | 16.4 | 10.1 | 5.8 | 1981 | 77.0 | 72.9 | 58.2 | 48.4 | 29.4 | 20.9 | 13.4 | 7.5 |
| 1986 | 72.2 | 68.1 | 53.4 | 43.8 | 25.1 | 17.0 | 10.6 | 6.1 | 1986 | 77.9 | 73.6 | 58.8 | 49.0 | 30.0 | 21.4 | 13.9 | 7.9 |
| 1991 | 73.4 | 69.1 | 54.4 | 44.9 | 26.2 | 17.8 | 11.2 | 6.4 | 1991 | 78.9 | 74.5 | 59.7 | 49.9 | 30.8 | 22.0 | 14.4 | 8.3 |
| 1996 | 74.5 | 70.1 | 55.4 | 45.8 | 27.1 | 18.7 | 11.7 | 6.6 | 1996 | 79.6 | 75.1 | 60.3 | 50.4 | 31.3 | 22.5 | 14.6 | 8.4 |
| 2000 | 75.6 | 71.2 | 56.4 | 46.9 | 28.2 | 19.6 | 12.4 | 7.0 | 2000 | 80.3 | 75.8 | 61.0 | 51.2 | 32.0 | 23.1 | 15.1 | 8.6 |
| 2001 | 75.9 | 71.4 | 56.7 | 47.1 | 28.5 | 19.9 | 12.6 | 7.1 | 2001 | 80.6 | 76.0 | 61.2 | 51.4 | 32.2 | 23.3 | 15.2 | 8.7 |
| 2002 | 76.1 | 71.7 | 56.9 | 47.4 | 28.7 | 20.1 | 12.7 | 7.2 | 2002 | 80.7 | 76.1 | 61.3 | 51.5 | 32.4 | 23.4 | 15.3 | 8.7 |
| 2003 | 76.5 | 72.0 | 57.2 | 47.6 | 28.9 | 20.4 | 12.9 | 7.3 | 2003 | 80.9 | 76.4 | 61.5 | 51.7 | 32.6 | 23.6 | 15.4 | 8.8 |
| 2004 | 76.8 | 72.3 | 57.6 | 48.0 | 29.2 | 20.7 | 13.2 | 7.4 | 2004 | 81.1 | 76.6 | 61.7 | 51.9 | 32.8 | 23.8 | 15.6 | 8.9 |
| 2005 | 77.2 | 72.7 | 57.9 | 48.3 | 29.6 | 21.0 | 13.5 | 7.6 | 2005 | 81.5 | 76.9 | 62.1 | 52.3 | 33.1 | 24.1 | 15.9 | 9.1 |
| 2006 | 77.5 | 73.0 | 58.2 | 48.6 | 29.8 | 21.2 | 13.7 | 7.7 | 2006 | 81.7 | 77.1 | 62.3 | 52.4 | 33.3 | 24.3 | 16.0 | 9.2 |
| **Wales** | | | | | | | | | | | | | | | | | |
| 1981 | 70.4 | 66.5 | 51.9 | 42.2 | 23.6 | 15.8 | 9.7 | 5.6 | 1981 | 76.4 | 72.3 | 57.5 | 47.7 | 28.9 | 20.5 | 13.1 | 7.4 |
| 1986 | 71.6 | 67.5 | 52.8 | 43.2 | 24.6 | 16.6 | 10.3 | 6.0 | 1986 | 77.5 | 73.3 | 58.5 | 48.7 | 29.7 | 21.1 | 13.7 | 7.8 |
| 1991 | 73.1 | 68.8 | 54.1 | 44.6 | 25.8 | 17.6 | 11.0 | 6.4 | 1991 | 78.8 | 74.3 | 59.5 | 49.7 | 30.6 | 21.8 | 14.3 | 8.3 |
| 1996 | 73.8 | 69.4 | 54.7 | 45.3 | 26.6 | 18.2 | 11.3 | 6.4 | 1996 | 79.1 | 74.6 | 59.7 | 49.9 | 30.9 | 22.1 | 14.4 | 8.3 |
| 2000 | 74.8 | 70.4 | 55.7 | 46.2 | 27.6 | 19.1 | 12.0 | 6.8 | 2000 | 79.7 | 75.2 | 60.4 | 50.6 | 31.5 | 22.6 | 14.7 | 8.4 |
| 2001 | 75.3 | 70.8 | 56.0 | 46.6 | 28.0 | 19.5 | 12.3 | 7.0 | 2001 | 80.0 | 75.4 | 60.6 | 50.8 | 31.7 | 22.8 | 14.9 | 8.5 |
| 2002 | 75.5 | 70.9 | 56.2 | 46.8 | 28.2 | 19.7 | 12.4 | 7.1 | 2002 | 80.1 | 75.5 | 60.7 | 50.9 | 31.8 | 22.9 | 15.0 | 8.6 |
| 2003 | 75.8 | 71.2 | 56.5 | 47.0 | 28.4 | 19.9 | 12.6 | 7.2 | 2003 | 80.3 | 75.7 | 60.9 | 51.1 | 32.0 | 23.1 | 15.1 | 8.6 |
| 2004 | 76.1 | 71.6 | 56.8 | 47.3 | 28.7 | 20.2 | 12.8 | 7.3 | 2004 | 80.6 | 76.0 | 61.1 | 51.3 | 32.2 | 23.3 | 15.2 | 8.7 |
| 2005 | 76.6 | 72.0 | 57.3 | 47.7 | 29.2 | 20.6 | 13.2 | 7.6 | 2005 | 80.9 | 76.3 | 61.5 | 51.6 | 32.6 | 23.7 | 15.5 | 8.9 |
| 2006 | 76.7 | 72.1 | 57.4 | 47.8 | 29.3 | 20.8 | 13.4 | 7.6 | 2006 | 81.1 | 76.5 | 61.6 | 51.8 | 32.7 | 23.8 | 15.7 | 9.0 |
| **Scotland** | | | | | | | | | | | | | | | | | |
| 1981 | 69.1 | 65.2 | 50.6 | 41.1 | 22.9 | 15.4 | 9.6 | 5.5 | 1981 | 75.3 | 71.2 | 56.4 | 46.7 | 27.9 | 19.7 | 12.7 | 7.2 |
| 1986 | 70.2 | 66.0 | 51.4 | 41.9 | 23.5 | 15.8 | 9.9 | 5.7 | 1986 | 76.2 | 71.9 | 57.1 | 47.3 | 28.4 | 20.1 | 13.0 | 7.5 |
| 1991 | 71.4 | 67.1 | 52.5 | 43.0 | 24.6 | 16.6 | 10.4 | 6.1 | 1991 | 77.1 | 72.7 | 57.9 | 48.1 | 29.2 | 20.7 | 13.5 | 7.9 |
| 1996 | 72.2 | 67.8 | 53.1 | 43.7 | 25.3 | 17.3 | 10.9 | 6.3 | 1996 | 77.9 | 73.3 | 58.5 | 48.8 | 29.8 | 21.2 | 13.8 | 8.0 |
| 2000 | 73.1 | 68.6 | 53.9 | 44.6 | 26.3 | 18.2 | 11.5 | 6.6 | 2000 | 78.6 | 74.0 | 59.2 | 49.4 | 30.5 | 21.8 | 14.1 | 8.1 |
| 2001 | 73.3 | 68.8 | 54.2 | 44.8 | 26.6 | 18.4 | 11.7 | 6.8 | 2001 | 78.8 | 74.2 | 59.4 | 49.6 | 30.7 | 22.0 | 14.3 | 8.2 |
| 2002 | 73.5 | 69.0 | 54.3 | 45.0 | 26.7 | 18.6 | 11.8 | 6.8 | 2002 | 78.9 | 74.3 | 59.5 | 49.7 | 30.8 | 22.1 | 14.4 | 8.2 |
| 2003 | 73.8 | 69.3 | 54.6 | 45.2 | 27.0 | 18.8 | 12.0 | 6.9 | 2003 | 79.1 | 74.5 | 59.7 | 49.9 | 30.9 | 22.2 | 14.5 | 8.3 |
| 2004 | 74.2 | 69.7 | 55.0 | 45.6 | 27.3 | 19.1 | 12.2 | 7.0 | 2004 | 79.3 | 74.7 | 59.9 | 50.1 | 31.1 | 22.4 | 14.7 | 8.4 |
| 2005 | 74.6 | 70.1 | 55.4 | 45.9 | 27.7 | 19.4 | 12.5 | 7.2 | 2005 | 79.6 | 75.0 | 60.2 | 50.4 | 31.4 | 22.7 | 14.9 | 8.5 |
| 2006 | 74.8 | 70.3 | 55.5 | 46.1 | 27.9 | 19.6 | 12.6 | 7.2 | 2006 | 79.7 | 75.1 | 60.3 | 50.5 | 31.5 | 22.8 | 15.0 | 8.6 |
| **Northern Ireland** | | | | | | | | | | | | | | | | | |
| 1981 | 69.2 | 65.4 | 50.9 | 41.5 | 23.2 | 15.6 | 9.7 | 5.8 | 1981 | 75.5 | 71.6 | 56.8 | 47.1 | 28.3 | 20.0 | 12.8 | 7.3 |
| 1986 | 70.9 | 66.8 | 52.2 | 42.7 | 24.2 | 16.4 | 10.4 | 6.2 | 1986 | 77.1 | 72.9 | 58.1 | 48.3 | 29.3 | 20.8 | 13.4 | 7.8 |
| 1991 | 72.6 | 68.2 | 53.6 | 44.1 | 25.5 | 17.3 | 11.0 | 6.4 | 1991 | 78.4 | 74.0 | 59.2 | 49.4 | 30.3 | 21.6 | 14.2 | 8.3 |
| 1996 | 73.8 | 69.4 | 54.7 | 45.3 | 26.6 | 18.2 | 11.4 | 6.6 | 1996 | 79.2 | 74.7 | 59.9 | 50.0 | 30.9 | 22.1 | 14.4 | 8.4 |
| 2000 | 74.8 | 70.4 | 55.7 | 46.2 | 27.6 | 19.1 | 11.9 | 6.6 | 2000 | 79.8 | 75.2 | 60.4 | 50.6 | 31.5 | 22.6 | 14.6 | 8.2 |
| 2001 | 75.2 | 70.7 | 56.1 | 46.6 | 27.9 | 19.4 | 12.3 | 6.9 | 2001 | 80.1 | 75.6 | 60.7 | 50.9 | 31.8 | 22.9 | 14.9 | 8.4 |
| 2002 | 75.6 | 71.1 | 56.4 | 46.9 | 28.2 | 19.7 | 12.4 | 7.0 | 2002 | 80.4 | 75.9 | 61.0 | 51.2 | 32.0 | 23.1 | 15.1 | 8.5 |
| 2003 | 75.8 | 71.4 | 56.7 | 47.1 | 28.4 | 19.9 | 12.6 | 7.2 | 2003 | 80.6 | 76.0 | 61.1 | 51.3 | 32.2 | 23.3 | 15.2 | 8.6 |
| 2004 | 76.0 | 71.6 | 56.9 | 47.4 | 28.7 | 20.2 | 12.8 | 7.3 | 2004 | 80.8 | 76.3 | 61.4 | 51.6 | 32.5 | 23.5 | 15.4 | 8.7 |
| 2005 | 76.1 | 71.6 | 57.0 | 47.5 | 28.9 | 20.4 | 13.0 | 7.3 | 2005 | 81.0 | 76.4 | 61.6 | 51.8 | 32.7 | 23.7 | 15.6 | 8.8 |
| 2006 | 76.2 | 71.7 | 57.1 | 47.6 | 29.1 | 20.6 | 13.1 | 7.3 | 2006 | 81.2 | 76.6 | 61.8 | 52.0 | 32.8 | 23.9 | 15.7 | 8.9 |

Note: All figures are based on a three-year period, so that for instance 2003 represents 2002–2004. The population estimates used to calculate these life expectancies are the latest available at time of publication of the 2005–2007 interim life tables (30 October 2008). All figures are based on death registrations. A minor methodological change was introduced for the 2006 figures to ensure consistency with population estimates of the very elderly for England and Wales. The effect on calculated life expectancies is marginal.

# Table 6.1 Deaths: age and sex

England and Wales

Numbers (thousands) and rates

| Year and quarter | All ages | Age group: Under 1[1] | 1–4 | 5–9 | 10–14 | 15–19 | 20–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65–74 | 75–84 | 85 and over |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Numbers (thousands)** | | | | | | | | | | | | | | |
| **Males** | | | | | | | | | | | | | | |
| 1976 | 300.1 | 4.88 | 0.88 | 0.68 | 0.64 | 1.66 | 1.66 | 3.24 | 5.93 | 20.4 | 52.0 | 98.7 | 80.3 | 29.0 |
| 1981 | 289.0 | 4.12 | 0.65 | 0.45 | 0.57 | 1.73 | 1.58 | 3.18 | 5.54 | 16.9 | 46.9 | 92.2 | 86.8 | 28.5 |
| 1986 | 287.9 | 3.72 | 0.57 | 0.33 | 0.38 | 1.43 | 1.75 | 3.10 | 5.77 | 14.4 | 43.6 | 84.4 | 96.2 | 32.2 |
| 1991 | 277.6 | 2.97 | 0.55 | 0.34 | 0.35 | 1.21 | 1.76 | 3.69 | 6.16 | 13.3 | 34.9 | 77.2 | 95.8 | 39.3 |
| 1996 | 268.7 | 2.27 | 0.44 | 0.24 | 0.29 | 0.93 | 1.41 | 4.06 | 5.84 | 13.6 | 30.1 | 71.0 | 90.7 | 47.8 |
| 1999 | 264.3 | 2.08 | 0.41 | 0.22 | 0.28 | 0.90 | 1.27 | 3.85 | 5.93 | 13.6 | 28.7 | 64.3 | 90.4 | 52.3 |
| 2000 | 255.5 | 1.89 | 0.34 | 0.22 | 0.28 | 0.87 | 1.22 | 3.76 | 6.05 | 13.4 | 27.9 | 60.6 | 87.1 | 51.9 |
| 2001 | 252.4 | 1.81 | 0.32 | 0.19 | 0.28 | 0.88 | 1.27 | 3.63 | 6.07 | 13.3 | 27.5 | 57.5 | 87.0 | 52.7 |
| 2002 | 253.1 | 1.81 | 0.32 | 0.20 | 0.28 | 0.83 | 1.24 | 3.47 | 6.20 | 12.9 | 27.7 | 56.3 | 88.3 | 53.6 |
| 2003 | 253.9 | 1.81 | 0.31 | 0.19 | 0.24 | 0.81 | 1.23 | 3.26 | 6.32 | 12.7 | 28.2 | 55.1 | 89.6 | 54.0 |
| 2004 | 244.1 | 1.79 | 0.29 | 0.17 | 0.26 | 0.78 | 1.15 | 3.10 | 6.19 | 12.2 | 27.0 | 52.5 | 87.3 | 51.3 |
| 2005 | 243.3 | 1.87 | 0.28 | 0.16 | 0.25 | 0.75 | 1.11 | 2.89 | 6.14 | 12.1 | 27.3 | 51.0 | 84.8 | 54.7 |
| 2006 | 240.9 | 1.86 | 0.29 | 0.19 | 0.26 | 0.84 | 1.21 | 3.13 | 6.32 | 12.3 | 27.6 | 48.9 | 81.9 | 56.2 |
| 2007 | 240.8 | 1.88 | 0.34 | 0.18 | 0.23 | 0.80 | 1.22 | 3.14 | 6.26 | 11.9 | 27.5 | 47.8 | 80.6 | 58.9 |
| **Females** | | | | | | | | | | | | | | |
| 1976 | 298.5 | 3.46 | 0.59 | 0.45 | 0.42 | 0.62 | 0.67 | 1.94 | 4.04 | 12.8 | 29.6 | 67.1 | 104.7 | 72.1 |
| 1981 | 288.9 | 2.90 | 0.53 | 0.30 | 0.37 | 0.65 | 0.64 | 1.82 | 3.74 | 10.5 | 27.2 | 62.8 | 103.6 | 73.9 |
| 1986 | 293.3 | 2.59 | 0.49 | 0.25 | 0.27 | 0.56 | 0.67 | 1.65 | 3.83 | 8.8 | 25.8 | 58.4 | 106.5 | 83.6 |
| 1991 | 292.5 | 2.19 | 0.44 | 0.25 | 0.22 | 0.46 | 0.64 | 1.73 | 3.70 | 8.4 | 21.3 | 54.2 | 103.3 | 95.7 |
| 1996 | 291.5 | 1.69 | 0.32 | 0.18 | 0.20 | 0.43 | 0.51 | 1.85 | 3.66 | 8.9 | 18.2 | 50.2 | 96.7 | 108.7 |
| 1999 | 291.8 | 1.55 | 0.30 | 0.17 | 0.22 | 0.39 | 0.47 | 1.67 | 3.79 | 9.0 | 18.0 | 45.1 | 93.9 | 117.2 |
| 2000 | 280.1 | 1.49 | 0.25 | 0.16 | 0.18 | 0.38 | 0.47 | 1.69 | 3.87 | 9.1 | 17.6 | 42.2 | 89.3 | 113.4 |
| 2001 | 277.9 | 1.43 | 0.27 | 0.19 | 0.18 | 0.38 | 0.47 | 1.59 | 3.77 | 8.9 | 17.6 | 40.5 | 88.8 | 113.9 |
| 2002 | 280.4 | 1.31 | 0.24 | 0.16 | 0.19 | 0.38 | 0.43 | 1.61 | 3.77 | 8.7 | 17.7 | 39.6 | 90.0 | 116.3 |
| 2003 | 284.4 | 1.50 | 0.28 | 0.15 | 0.19 | 0.35 | 0.46 | 1.57 | 3.86 | 8.5 | 18.0 | 39.0 | 92.7 | 117.9 |
| 2004 | 268.4 | 1.43 | 0.23 | 0.13 | 0.16 | 0.38 | 0.46 | 1.49 | 3.80 | 8.1 | 17.6 | 36.9 | 88.3 | 109.4 |
| 2005 | 269.1 | 1.37 | 0.22 | 0.13 | 0.18 | 0.38 | 0.48 | 1.48 | 3.81 | 8.2 | 17.8 | 36.0 | 86.4 | 113.1 |
| 2006 | 261.7 | 1.51 | 0.27 | 0.14 | 0.17 | 0.38 | 0.44 | 1.38 | 3.80 | 8.1 | 17.9 | 34.5 | 81.2 | 111.9 |
| 2007 | 263.3 | 1.46 | 0.24 | 0.12 | 0.19 | 0.36 | 0.45 | 1.36 | 3.79 | 8.1 | 18.2 | 33.9 | 79.4 | 115.8 |
| **Rates (deaths per 1,000 population in each age group)** | | | | | | | | | | | | | | |
| **Males** | | | | | | | | | | | | | | |
| 1976 | 12.5 | 16.2 | 0.65 | 0.34 | 0.31 | 0.88 | 0.96 | 0.92 | 2.09 | 6.97 | 19.6 | 50.3 | 116.4 | 243.2 |
| 1981 | 12.0 | 12.6 | 0.53 | 0.27 | 0.29 | 0.82 | 0.83 | 0.89 | 1.83 | 6.11 | 17.7 | 45.6 | 105.2 | 226.5 |
| 1986 | 11.8 | 11.0 | 0.44 | 0.21 | 0.23 | 0.72 | 0.83 | 0.88 | 1.68 | 5.27 | 16.6 | 42.8 | 101.2 | 215.4 |
| 1991 | 11.2 | 8.3 | 0.40 | 0.21 | 0.23 | 0.72 | 0.89 | 0.94 | 1.76 | 4.56 | 13.9 | 38.1 | 93.1 | 205.6 |
| 1996 | 10.7 | 6.8 | 0.32 | 0.14 | 0.18 | 0.60 | 0.85 | 1.01 | 1.67 | 4.06 | 11.9 | 34.5 | 85.0 | 198.8 |
| 1999 | 10.4 | 6.5 | 0.31 | 0.12 | 0.16 | 0.56 | 0.83 | 0.99 | 1.60 | 3.99 | 10.9 | 31.6 | 79.9 | 194.4 |
| 2000 | 10.0 | 6.1 | 0.26 | 0.13 | 0.16 | 0.54 | 0.79 | 0.98 | 1.59 | 3.92 | 10.4 | 29.7 | 75.9 | 187.5 |
| 2001 | 9.9 | 5.9 | 0.25 | 0.11 | 0.16 | 0.53 | 0.80 | 0.97 | 1.56 | 3.89 | 10.0 | 28.0 | 74.0 | 186.4 |
| 2002 | 9.8 | 5.9 | 0.25 | 0.12 | 0.16 | 0.49 | 0.77 | 0.94 | 1.57 | 3.86 | 9.7 | 27.2 | 73.5 | 187.7 |
| 2003 | 9.8 | 5.7 | 0.25 | 0.11 | 0.14 | 0.46 | 0.75 | 0.91 | 1.58 | 3.81 | 9.6 | 26.4 | 72.9 | 191.0 |
| 2004 | 9.4 | 5.5 | 0.23 | 0.10 | 0.15 | 0.44 | 0.67 | 0.87 | 1.53 | 3.67 | 9.0 | 25.0 | 69.9 | 176.0 |
| 2005 | 9.3 | 5.7 | 0.24 | 0.10 | 0.16 | 0.48 | 0.69 | 0.89 | 1.56 | 3.61 | 8.9 | 24.1 | 67.4 | 172.1 |
| 2006 | 9.1 | 5.4 | 0.23 | 0.12 | 0.15 | 0.46 | 0.67 | 0.89 | 1.55 | 3.58 | 8.8 | 23.2 | 64.7 | 163.4 |
| 2007[2] | 9.1 | 5.3 | 0.26 | 0.12 | 0.13 | 0.42 | 0.65 | 0.89 | 1.54 | 3.42 | 8.7 | 22.5 | 62.8 | 161.0 |
| 2005 March | 10.5 | 6.2 | 0.26 | 0.09 | 0.17 | 0.46 | 0.71 | 0.88 | 1.56 | 3.83 | 9.7 | 26.6 | 77.3 | 201.2 |
| June | 9.1 | 5.5 | 0.25 | 0.10 | 0.18 | 0.42 | 0.59 | 0.83 | 1.57 | 3.53 | 8.8 | 23.4 | 65.8 | 162.9 |
| Sept | 8.3 | 5.3 | 0.20 | 0.09 | 0.12 | 0.40 | 0.63 | 0.85 | 1.44 | 3.46 | 8.3 | 22.2 | 59.6 | 146.0 |
| Dec | 9.3 | 5.6 | 0.21 | 0.11 | 0.11 | 0.39 | 0.62 | 0.73 | 1.46 | 3.54 | 8.8 | 24.0 | 66.9 | 176.9 |
| 2006 March | 10.2 | 5.3 | 0.29 | 0.14 | 0.16 | 0.46 | 0.72 | 0.95 | 1.59 | 3.82 | 9.5 | 25.4 | 73.7 | 189.6 |
| June | 9.0 | 5.5 | 0.24 | 0.10 | 0.15 | 0.45 | 0.69 | 0.89 | 1.57 | 3.60 | 8.8 | 23.3 | 63.7 | 158.5 |
| Sept | 8.4 | 5.4 | 0.14 | 0.11 | 0.15 | 0.51 | 0.58 | 0.83 | 1.49 | 3.43 | 8.3 | 21.5 | 58.7 | 143.8 |
| Dec | 8.9 | 5.6 | 0.26 | 0.13 | 0.15 | 0.43 | 0.69 | 0.90 | 1.54 | 3.50 | 8.7 | 22.5 | 62.7 | 162.1 |
| 2007[2] March | 10.0 | 5.3 | 0.29 | 0.12 | 0.14 | 0.47 | 0.65 | 0.92 | 1.55 | 3.68 | 9.2 | 24.4 | 69.9 | 184.3 |
| June | 8.8 | 5.7 | 0.26 | 0.12 | 0.14 | 0.44 | 0.65 | 0.90 | 1.50 | 3.39 | 8.6 | 22.1 | 60.7 | 152.3 |
| Sept | 8.3 | 5.1 | 0.22 | 0.09 | 0.13 | 0.40 | 0.61 | 0.88 | 1.49 | 3.18 | 8.2 | 20.7 | 57.1 | 140.5 |
| Dec | 9.3 | 5.2 | 0.28 | 0.13 | 0.12 | 0.43 | 0.69 | 0.88 | 1.61 | 3.45 | 9.0 | 22.8 | 63.6 | 167.3 |
| 2008[3] March[P] | 9.7 | 5.4 | 0.21 | 0.12 | 0.11 | 0.36 | 0.60 | 0.84 | 1.56 | 3.65 | 9.0 | 23.3 | 65.7 | 178.3 |
| June[P] | 8.8 | 5.3 | 0.22 | 0.12 | 0.12 | 0.45 | 0.61 | 0.87 | 1.58 | 3.38 | 8.5 | 21.6 | 59.8 | 155.6 |
| **Females** | | | | | | | | | | | | | | |
| 1976 | 11.8 | 12.2 | 0.46 | 0.24 | 0.21 | 0.35 | 0.40 | 0.56 | 1.46 | 4.30 | 10.1 | 26.0 | 74.6 | 196.6 |
| 1981 | 11.3 | 9.4 | 0.46 | 0.19 | 0.19 | 0.32 | 0.35 | 0.52 | 1.26 | 3.80 | 9.5 | 24.1 | 66.2 | 178.2 |
| 1986 | 11.4 | 8.0 | 0.40 | 0.17 | 0.17 | 0.29 | 0.33 | 0.47 | 1.12 | 3.24 | 9.2 | 23.4 | 62.5 | 169.4 |
| 1991 | 11.2 | 6.4 | 0.33 | 0.16 | 0.15 | 0.29 | 0.33 | 0.44 | 1.05 | 2.87 | 8.2 | 21.8 | 58.7 | 161.6 |
| 1996 | 11.0 | 5.3 | 0.25 | 0.10 | 0.12 | 0.29 | 0.31 | 0.46 | 1.04 | 2.63 | 7.1 | 20.6 | 55.8 | 158.9 |
| 1999 | 11.0 | 5.1 | 0.24 | 0.10 | 0.13 | 0.25 | 0.31 | 0.43 | 1.01 | 2.61 | 6.7 | 19.2 | 53.4 | 162.6 |
| 2000 | 10.5 | 5.1 | 0.20 | 0.10 | 0.11 | 0.25 | 0.30 | 0.44 | 1.00 | 2.62 | 6.4 | 18.1 | 50.8 | 155.2 |
| 2001 | 10.4 | 4.9 | 0.22 | 0.12 | 0.11 | 0.24 | 0.30 | 0.42 | 0.96 | 2.57 | 6.3 | 17.4 | 50.1 | 155.0 |
| 2002 | 10.4 | 4.5 | 0.20 | 0.10 | 0.11 | 0.24 | 0.27 | 0.44 | 0.94 | 2.54 | 6.0 | 17.0 | 50.4 | 159.4 |
| 2003 | 10.6 | 4.9 | 0.24 | 0.10 | 0.12 | 0.21 | 0.28 | 0.43 | 0.95 | 2.51 | 5.9 | 16.7 | 51.3 | 165.6 |
| 2004 | 9.9 | 4.6 | 0.20 | 0.09 | 0.10 | 0.22 | 0.27 | 0.42 | 0.93 | 2.39 | 5.7 | 15.8 | 48.6 | 154.3 |
| 2005 | 9.9 | 4.4 | 0.19 | 0.09 | 0.11 | 0.22 | 0.27 | 0.40 | 0.90 | 2.38 | 5.6 | 15.4 | 48.1 | 152.7 |
| 2006 | 9.6 | 4.6 | 0.22 | 0.09 | 0.10 | 0.22 | 0.26 | 0.39 | 0.92 | 2.33 | 5.6 | 14.8 | 45.7 | 143.8 |
| 2007[2] | 9.6 | 4.3 | 0.19 | 0.08 | 0.12 | 0.21 | 0.25 | 0.39 | 0.92 | 2.27 | 5.6 | 14.5 | 44.9 | 143.6 |
| 2005 March | 11.6 | 4.8 | 0.22 | 0.09 | 0.13 | 0.20 | 0.32 | 0.46 | 0.95 | 2.57 | 6.0 | 17.3 | 57.0 | 184.7 |
| June | 9.5 | 4.7 | 0.20 | 0.10 | 0.10 | 0.25 | 0.27 | 0.37 | 0.97 | 2.31 | 5.5 | 15.0 | 46.6 | 144.2 |
| Sept | 8.7 | 3.9 | 0.14 | 0.06 | 0.09 | 0.20 | 0.24 | 0.36 | 0.86 | 2.32 | 5.4 | 13.8 | 42.0 | 129.7 |
| Dec | 9.8 | 4.2 | 0.19 | 0.08 | 0.11 | 0.22 | 0.24 | 0.41 | 0.84 | 2.31 | 5.6 | 15.3 | 46.8 | 152.7 |
| 2006 March | 11.0 | 5.0 | 0.25 | 0.07 | 0.08 | 0.24 | 0.30 | 0.39 | 1.01 | 2.42 | 6.1 | 16.4 | 52.5 | 172.0 |
| June | 9.4 | 4.6 | 0.22 | 0.10 | 0.14 | 0.19 | 0.24 | 0.42 | 0.88 | 2.35 | 5.5 | 14.7 | 45.4 | 140.9 |
| Sept | 8.6 | 4.3 | 0.19 | 0.10 | 0.08 | 0.23 | 0.22 | 0.36 | 0.91 | 2.27 | 5.3 | 13.7 | 41.1 | 124.3 |
| Dec | 9.2 | 4.5 | 0.24 | 0.09 | 0.12 | 0.23 | 0.25 | 0.41 | 0.89 | 2.27 | 5.5 | 14.3 | 43.7 | 138.7 |
| 2007[2] March | 10.9 | 4.5 | 0.24 | 0.07 | 0.12 | 0.27 | 0.27 | 0.38 | 0.97 | 2.31 | 5.9 | 16.3 | 51.7 | 167.0 |
| June | 9.2 | 4.6 | 0.21 | 0.10 | 0.13 | 0.18 | 0.22 | 0.44 | 0.86 | 2.31 | 5.5 | 14.1 | 42.8 | 136.0 |
| Sept | 8.5 | 4.1 | 0.14 | 0.06 | 0.11 | 0.18 | 0.28 | 0.36 | 0.87 | 2.22 | 5.2 | 12.9 | 40.0 | 124.3 |
| Dec | 9.8 | 4.2 | 0.16 | 0.10 | 0.12 | 0.20 | 0.25 | 0.38 | 0.96 | 2.25 | 5.7 | 14.7 | 45.4 | 147.9 |
| 2008[3] March[P] | 10.4 | 4.5 | 0.20 | 0.07 | 0.09 | 0.22 | 0.23 | 0.41 | 0.93 | 2.34 | 5.6 | 15.0 | 48.6 | 161.8 |
| June[P] | 9.3 | 3.6 | 0.20 | 0.11 | 0.10 | 0.16 | 0.27 | 0.41 | 0.92 | 2.29 | 5.4 | 13.7 | 42.7 | 140.5 |

Note: Figures represent the numbers of deaths registered in each year up to 1992 and the numbers of deaths occurring in each year from 1993 to 2005, 2006, 2007 and provisional 2008 figures relate to registrations.
Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.

1 Rates per 1,000 live births.

2 Death rates for 2007 have been calculated using the mid 2007 population estimates published on 21 August 2008.

3 Death rates for 2008 are based on the 2006-based population projections for 2008.

p provisional.

## Table 6.2 Deaths: subnational

Government Office Regions of England

Rates

| Year and quarter | | North East | North West | Yorkshire and The Humber | East Midlands | West Midlands | East | London | South East | South West |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total deaths (deaths per 1,000 population of all ages)** | | | | | | | | | | |
| 1996 | | 11.7 | 11.7 | 11.2 | 10.7 | 10.7 | 10.3 | 9.4 | 10.7 | 11.7 |
| 1997 | | 11.6 | 11.6 | 11.1 | 10.5 | 10.6 | 10.2 | 9.0 | 10.6 | 11.7 |
| 1998 | | 11.9 | 11.7 | 11.2 | 10.8 | 10.6 | 10.2 | 8.8 | 10.4 | 11.4 |
| 1999 | | 11.6 | 11.5 | 10.9 | 10.7 | 10.7 | 10.3 | 8.7 | 10.5 | 11.6 |
| 2000 | | 10.8 | 10.7 | 10.3 | 10.0 | 10.3 | 9.9 | 8.2 | 9.8 | 11.3 |
| 2001 | | 11.1 | 11.0 | 10.4 | 10.1 | 10.2 | 9.9 | 7.9 | 9.9 | 11.0 |
| 2002 | | 11.2 | 11.0 | 10.5 | 10.2 | 10.3 | 10.0 | 7.8 | 10.0 | 11.1 |
| 2003 | | 11.3 | 11.0 | 10.5 | 10.3 | 10.5 | 9.9 | 7.9 | 9.9 | 11.2 |
| 2004 | | 11.0 | 10.5 | 10.1 | 9.7 | 9.9 | 9.5 | 7.3 | 9.4 | 10.4 |
| 2005 | | 10.8 | 10.4 | 9.9 | 9.7 | 9.9 | 9.4 | 7.1 | 9.4 | 10.4 |
| 2006 | | 10.5 | 10.2 | 9.6 | 9.6 | 9.7 | 9.2 | 6.8 | 9.2 | 10.1 |
| 2007[1] | | 10.4 | 10.3 | 9.7 | 9.4 | 9.7 | 9.1 | 6.7 | 9.1 | 10.2 |
| 2006 | March | 11.6 | 11.4 | 10.7 | 10.8 | 11.1 | 10.6 | 7.8 | 10.8 | 11.6 |
| | June | 10.6 | 10.2 | 9.5 | 9.5 | 9.6 | 9.2 | 6.7 | 8.9 | 9.9 |
| | Sept | 9.4 | 9.3 | 8.8 | 8.7 | 8.8 | 8.3 | 6.2 | 8.1 | 9.1 |
| | Dec | 10.6 | 9.9 | 9.5 | 9.5 | 9.4 | 9.0 | 6.5 | 8.8 | 9.9 |
| 2007[1] | March | 11.8 | 11.7 | 10.9 | 10.6 | 11.0 | 10.2 | 7.4 | 10.0 | 11.5 |
| | June | 9.9 | 9.9 | 9.5 | 9.1 | 9.4 | 8.8 | 6.5 | 8.8 | 9.8 |
| | Sept | 9.4 | 9.2 | 8.8 | 8.5 | 8.5 | 8.3 | 6.1 | 8.2 | 9.2 |
| | Dec | 10.7 | 10.4 | 10.0 | 9.7 | 9.8 | 9.4 | 6.8 | 9.5 | 10.5 |
| 2008[1] | March[p] | 11.4 | 10.9 | 10.3 | 10.0 | 10.4 | 9.9 | 7.2 | 9.7 | 10.8 |
| | June[p] | 9.9 | 9.7 | 9.5 | 9.2 | 9.3 | 9.0 | 6.4 | 8.8 | 9.8 |
| **Infant mortality (deaths under 1 year per 1,000 live births)** | | | | | | | | | | |
| 1996 | | 6.2 | 6.3 | 6.5 | 6.3 | 6.8 | 5.3 | 6.3 | 5.3 | 5.5 |
| 1997 | | 5.8 | 6.7 | 6.5 | 5.7 | 7.0 | 4.8 | 5.8 | 5.0 | 5.8 |
| 1998 | | 5.0 | 6.3 | 6.9 | 5.6 | 6.5 | 5.0 | 6.0 | 4.4 | 4.8 |
| 1999 | | 5.6 | 6.5 | 6.3 | 6.0 | 6.9 | 4.6 | 6.0 | 4.8 | 4.7 |
| 2000 | | 6.5 | 6.2 | 7.3 | 5.4 | 6.8 | 4.4 | 5.4 | 4.4 | 4.7 |
| 2001 | | 5.4 | 5.8 | 5.5 | 4.9 | 6.4 | 4.5 | 6.1 | 4.2 | 5.4 |
| 2002 | | 4.8 | 5.4 | 6.1 | 5.6 | 6.6 | 4.3 | 5.5 | 4.5 | 4.3 |
| 2003 | | 4.9 | 5.9 | 5.7 | 5.9 | 7.4 | 4.5 | 5.4 | 4.2 | 4.1 |
| 2004 | | 4.6 | 5.4 | 5.8 | 4.9 | 6.3 | 4.2 | 5.2 | 3.9 | 4.5 |
| 2005 | | 4.7 | 5.6 | 6.0 | 4.8 | 6.6 | 4.0 | 5.2 | 3.9 | 4.5 |
| 2006 | | 5.4 | 5.6 | 5.7 | 5.4 | 6.4 | 4.1 | 4.9 | 4.1 | 4.0 |
| 2007 | | 4.7 | 5.0 | 5.7 | 5.3 | 5.9 | 4.3 | 4.5 | 3.9 | 4.2 |
| 2006 | March | 5.4 | 6.0 | 5.4 | 5.9 | 6.6 | 3.8 | 5.5 | 4.3 | 4.2 |
| | June | 6.4 | 5.5 | 6.1 | 5.0 | 7.0 | 4.3 | 4.6 | 4.2 | 3.7 |
| | Sept | 5.4 | 5.2 | 4.8 | 5.3 | 6.7 | 3.6 | 4.8 | 4.2 | 3.6 |
| | Dec | 4.5 | 5.7 | 6.6 | 5.5 | 5.3 | 4.6 | 4.7 | 3.9 | 4.7 |
| 2007 | March | 5.1 | 5.1 | 4.5 | 5.3 | 6.4 | 4.2 | 4.5 | 3.9 | 4.4 |
| | June | 4.5 | 5.5 | 7.2 | 6.5 | 6.1 | 3.9 | 5.1 | 4.3 | 3.9 |
| | Sept | 4.0 | 4.3 | 5.2 | 5.1 | 5.5 | 4.7 | 4.7 | 3.9 | 4.1 |
| | Dec | 5.3 | 5.2 | 5.7 | 4.3 | 5.7 | 4.4 | 4.0 | 3.5 | 4.2 |
| 2008 | March[p] | 4.3 | 4.9 | 5.8 | 4.7 | 7.7 | 4.4 | 4.0 | 4.5 | 4.9 |
| | June[p] | 4.4 | 4.9 | 4.6 | 4.9 | 6.7 | 4.3 | 3.9 | 3.7 | 3.1 |
| **Neonatal mortality (deaths under 4 weeks per 1,000 live births)** | | | | | | | | | | |
| 1996 | | 4.1 | 4.0 | 4.2 | 4.2 | 4.9 | 3.5 | 4.4 | 3.5 | 3.8 |
| 1997 | | 3.7 | 4.3 | 4.4 | 3.7 | 5.0 | 3.3 | 3.7 | 3.4 | 3.9 |
| 1998 | | 3.1 | 4.1 | 4.5 | 3.7 | 4.8 | 3.4 | 4.1 | 2.9 | 3.3 |
| 1999 | | 4.1 | 4.4 | 4.1 | 4.3 | 4.8 | 3.0 | 4.1 | 3.2 | 3.2 |
| 2000 | | 4.4 | 4.3 | 5.0 | 4.1 | 5.0 | 3.0 | 3.7 | 3.1 | 3.0 |
| 2001 | | 3.5 | 3.8 | 3.2 | 3.4 | 4.4 | 2.9 | 4.1 | 2.9 | 3.7 |
| 2002 | | 3.2 | 3.6 | 4.0 | 4.0 | 4.8 | 2.9 | 3.6 | 2.9 | 3.1 |
| 2003 | | 3.2 | 4.1 | 4.0 | 4.2 | 5.1 | 3.0 | 3.7 | 2.8 | 2.9 |
| 2004 | | 2.8 | 3.6 | 3.8 | 3.5 | 4.7 | 2.9 | 3.6 | 2.8 | 3.2 |
| 2005 | | 2.9 | 3.8 | 4.0 | 3.5 | 4.9 | 2.6 | 3.4 | 2.7 | 3.2 |
| 2006 | | 3.8 | 3.8 | 4.0 | 4.0 | 4.6 | 2.9 | 3.4 | 2.8 | 2.9 |
| 2007 | | 3.0 | 3.3 | 4.0 | 3.6 | 4.5 | 3.0 | 3.1 | 2.6 | 2.8 |
| 2006 | March | 4.1 | 3.8 | 4.0 | 4.2 | 4.6 | 2.7 | 3.4 | 2.9 | 3.2 |
| | June | 4.0 | 3.8 | 4.2 | 3.9 | 5.1 | 3.2 | 3.3 | 2.7 | 2.4 |
| | Sept | 3.4 | 3.5 | 3.3 | 3.9 | 5.4 | 2.5 | 3.5 | 2.9 | 2.6 |
| | Dec | 3.7 | 4.1 | 4.7 | 4.0 | 3.2 | 3.1 | 3.6 | 2.5 | 3.6 |
| 2007 | March | 4.0 | 3.8 | 3.3 | 3.4 | 4.8 | 2.9 | 3.0 | 2.6 | 3.0 |
| | June | 1.8 | 3.7 | 5.2 | 4.5 | 4.6 | 2.6 | 3.5 | 3.0 | 2.5 |
| | Sept | 2.6 | 2.7 | 3.5 | 3.5 | 4.2 | 3.1 | 3.1 | 2.5 | 3.1 |
| | Dec | 3.7 | 2.9 | 3.8 | 2.8 | 4.6 | 3.6 | 2.7 | 2.4 | 2.7 |
| 2008 | March[p] | 3.3 | 3.3 | 4.0 | 3.6 | 5.8 | 3.0 | 2.8 | 2.9 | 3.1 |
| | June[p] | 2.7 | 3.4 | 2.7 | 3.3 | 4.3 | 2.7 | 2.6 | 2.7 | 2.5 |
| **Perinatal mortality (stillbirths and deaths under 1 week per 1,000 total births)** | | | | | | | | | | |
| 1996 | | 9.2 | 8.6 | 8.3 | 8.7 | 10.2 | 7.5 | 9.6 | 7.8 | 7.5 |
| 1997 | | 8.0 | 8.9 | 8.3 | 7.7 | 9.6 | 7.3 | 9.0 | 7.3 | 8.7 |
| 1998 | | 8.2 | 8.7 | 9.2 | 8.0 | 9.3 | 7.4 | 9.0 | 6.8 | 7.3 |
| 1999 | | 8.2 | 8.7 | 8.3 | 7.8 | 9.9 | 7.0 | 9.0 | 6.9 | 7.8 |
| 2000 | | 8.5 | 8.6 | 9.6 | 7.8 | 9.6 | 7.1 | 9.0 | 6.6 | 6.6 |
| 2001 | | 7.8 | 8.7 | 7.5 | 7.9 | 9.1 | 7.1 | 8.9 | 6.9 | 7.2 |
| 2002 | | 8.1 | 8.5 | 9.0 | 8.5 | 10.0 | 7.5 | 9.3 | 6.9 | 6.8 |
| 2003 | | 7.8 | 9.0 | 9.1 | 9.5 | 10.2 | 7.3 | 9.6 | 7.0 | 7.0 |
| 2004 | | 7.9 | 8.4 | 9.4 | 8.1 | 9.6 | 7.6 | 9.3 | 7.0 | 7.2 |
| 2005 | | 7.8 | 8.2 | 9.4 | 7.6 | 9.9 | 6.4 | 8.5 | 6.8 | 6.8 |
| 2006 | | 8.0 | 8.3 | 8.5 | 8.4 | 9.2 | 6.7 | 8.8 | 7.0 | 6.6 |
| 2007 | | 7.3 | 7.9 | 8.8 | 7.3 | 9.1 | 7.0 | 8.4 | 6.6 | 6.4 |
| 2006 | March | 8.2 | 9.0 | 7.6 | 8.7 | 9.6 | 7.4 | 9.1 | 7.6 | 6.5 |
| | June | 8.7 | 8.3 | 9.2 | 9.1 | 10.1 | 7.0 | 8.7 | 6.8 | 6.8 |
| | Sept | 7.5 | 8.0 | 8.4 | 8.4 | 9.6 | 6.6 | 8.7 | 6.6 | 6.2 |
| | Dec | 7.8 | 7.8 | 8.7 | 7.6 | 7.4 | 6.0 | 8.9 | 7.0 | 7.0 |
| 2007 | March | 7.8 | 8.5 | 7.8 | 6.8 | 9.5 | 7.6 | 8.3 | 6.6 | 6.8 |
| | June | 6.8 | 7.4 | 9.2 | 8.6 | 9.8 | 6.7 | 9.1 | 7.1 | 6.5 |
| | Sept | 7.4 | 7.2 | 8.9 | 7.1 | 7.7 | 7.0 | 8.6 | 6.1 | 6.5 |
| | Dec | 7.1 | 8.5 | 9.0 | 6.7 | 9.5 | 6.8 | 7.6 | 6.6 | 6.0 |
| 2008 | March[p] | 6.5 | 8.2 | 9.2 | 7.9 | 11.5 | 6.1 | 7.7 | 6.6 | 6.3 |
| | June[p] | 7.5 | 8.0 | 7.7 | 7.5 | 9.3 | 6.4 | 7.7 | 6.6 | 6.3 |

Note: Figures represent the numbers of deaths occurring in each year with the exception of 2006, 2007 and provisional 2008 figures relate to registrations.
Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.
1 Total deaths rates for 2007 and 2008 have been calculated using the mid-2007 population estimates published on 21 August 2008.
p provisional.

## Table 6.3 Deaths: selected causes (International Classification)[1] and sex

England and Wales

Number (thousands) and rate for all deaths and age-standardised rates per million population for selected causes

| Year and quarter | All deaths | | All causes (age - standardised rates per million population[2]) | Malignant neoplasms | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number (thousands) | Crude rate per 100,000 population | | Oesophagus | Stomach | Colon | Rectosigmoid junction, rectum, and anus | Trachea, bronchus and lung | Melanoma of skin | Other malignant neoplasms of skin | Breast | Cervix uteri | Ovary |
| | | | A00–R99 V01–Y89 | (C15) | (C16) | (C18) | (C19–C21) | (C33–C34) | (C43) | (C44) | (C50) | (C53) | (C56) |
| **Males** | | | | | | | | | | | | | |
| 1971 | 288.4 | 1,207 | 13,466 | 76 | 317 | 187 | 144 | 1,066 | 10 | 12 | 4 | : | : |
| 1981 | 289.0 | 1,196 | 12,189 | 90 | 251 | 181 | 135 | 1,028 | 17 | 9 | 3 | : | : |
| 1991 | 277.6 | 1,125 | 10,291 | 117 | 185 | 194 | 117 | 842 | 23 | 10 | 3 | : | : |
| 1998 | 264.7 | 1,064 | 8,981 | 129 | 132 | 169 | 95 | 643 | 26 | 8 | 3 | : | : |
| 1999 | 264.3 | 1,044 | 8,862 | 127 | 127 | 161 | 90 | 611 | 27 | 7 | 2 | : | : |
| 2000 | 255.5 | 1,005 | 8,437 | 128 | 118 | 158 | 89 | 592 | 28 | 7 | 2 | : | : |
| 2001 | 252.4 | 987 | 8,188 | 129 | 111 | 155 | 89 | 570 | 26 | 7 | 3 | : | : |
| 2002 | 253.1 | 985 | 8,081 | 131 | 110 | 151 | 90 | 559 | 27 | 8 | 3 | : | : |
| 2003 | 253.9 | 982 | 8,000 | 135 | 102 | 145 | 90 | 539 | 28 | 8 | 2 | : | : |
| 2004 | 244.1 | 939 | 7,554 | 129 | 95 | 143 | 92 | 521 | 30 | 9 | 2 | : | : |
| 2005 | 243.3 | 929 | 7,356 | 132 | 93 | 137 | 92 | 515 | 28 | 8 | 2 | : | : |
| 2006 | 240.9 | 913 | 7,123 | 131 | 83 | 132 | 90 | 509 | 31 | 7 | 2 | : | : |
| 2007 | 240.8 | 906 | 6,949 | 128 | 82 | 128 | 88 | 498 | 31 | 8 | 3 | : | : |
| 2006 March | 66.5 | 1,023 | 7,931 | 131 | 82 | 134 | 98 | 522 | 32 | 7 | 2 | : | : |
| June | 59.4 | 904 | 7,058 | 132 | 82 | 128 | 87 | 504 | 30 | 7 | 2 | : | : |
| Sept | 55.5 | 835 | 6,536 | 128 | 81 | 133 | 85 | 497 | 29 | 7 | 1 | : | : |
| Dec | 59.5 | 894 | 6,985 | 131 | 86 | 133 | 91 | 515 | 31 | 8 | 3 | : | : |
| 2007 March | 65.4 | 998 | 7,616 | 126 | 88 | 132 | 86 | 523 | 33 | 7 | 2 | : | : |
| June | 58.2 | 879 | 6,756 | 130 | 84 | 122 | 86 | 493 | 31 | 8 | 3 | : | : |
| Sept | 55.2 | 824 | 6,340 | 128 | 80 | 126 | 87 | 470 | 29 | 7 | 3 | : | : |
| Dec | 62.0 | 926 | 7,096 | 129 | 78 | 132 | 94 | 509 | 31 | 9 | 3 | : | : |
| 2008[3] March | 64.4[p] | 967[p] | 7,288[p] | 135[p] | 80[p] | 132[p] | 88[p] | 508[p] | 29[p] | 5[p] | 1[p] | : | : |
| June | 58.9[p] | 884[p] | 6,700[p] | 125[p] | 77[p] | 130[p] | 90[p] | 476[p] | 33[p] | 8[p] | 2[p] | : | : |
| **Females** | | | | | | | | | | | | | |
| 1971 | 278.9 | 1,104 | 8,189 | 40 | 149 | 176 | 79 | 183 | 14 | 6 | 379 | 83 | 126 |
| 1981 | 288.9 | 1,134 | 7,425 | 42 | 111 | 157 | 74 | 252 | 16 | 5 | 405 | 69 | 121 |
| 1991 | 292.5 | 1,122 | 6,410 | 50 | 74 | 146 | 61 | 300 | 18 | 4 | 401 | 54 | 118 |
| 1998 | 290.3 | 1,108 | 5,945 | 49 | 54 | 117 | 47 | 291 | 21 | 3 | 328 | 35 | 116 |
| 1999 | 291.8 | 1,097 | 5,929 | 52 | 51 | 115 | 46 | 289 | 20 | 3 | 319 | 33 | 111 |
| 2000 | 280.1 | 1,049 | 5,655 | 51 | 48 | 107 | 45 | 285 | 21 | 3 | 311 | 33 | 109 |
| 2001 | 277.9 | 1,038 | 5,543 | 48 | 46 | 103 | 45 | 283 | 20 | 3 | 308 | 31 | 112 |
| 2002 | 280.4 | 1,043 | 5,524 | 51 | 44 | 103 | 44 | 284 | 19 | 3 | 302 | 29 | 112 |
| 2003 | 284.4 | 1,055 | 5,575 | 50 | 42 | 98 | 46 | 285 | 20 | 3 | 293 | 27 | 108 |
| 2004 | 268.4 | 1,075 | 5,206 | 48 | 41 | 96 | 46 | 283 | 19 | 3 | 278 | 26 | 100 |
| 2005 | 269.4 | 990 | 5,188 | 48 | 39 | 96 | 46 | 290 | 21 | 3 | 284 | 26 | 102 |
| 2006 | 261.7 | 956 | 4,989 | 48 | 35 | 93 | 46 | 300 | 19 | 4 | 277 | 24 | 99 |
| 2007 | 263.3 | 957 | 4,921 | 47 | 35 | 92 | 48 | 300 | 21 | 4 | 267 | 24 | 96 |
| 2006 March | 74.5 | 1,104 | 5,658 | 48 | 40 | 90 | 45 | 309 | 16 | 4 | 296 | 26 | 105 |
| June | 64.4 | 945 | 4,940 | 46 | 34 | 89 | 46 | 294 | 18 | 4 | 266 | 22 | 101 |
| Sept | 59.1 | 856 | 4,540 | 47 | 33 | 99 | 44 | 289 | 19 | 3 | 272 | 23 | 96 |
| Dec | 63.7 | 923 | 4,832 | 51 | 34 | 95 | 49 | 307 | 21 | 4 | 273 | 23 | 93 |
| 2007 March | 74.0 | 1,091 | 5,523 | 50 | 35 | 92 | 49 | 315 | 22 | 4 | 284 | 25 | 95 |
| June | 62.8 | 916 | 4,757 | 48 | 31 | 88 | 45 | 296 | 22 | 4 | 267 | 22 | 97 |
| Sept | 58.8 | 847 | 4,408 | 40 | 37 | 91 | 47 | 285 | 21 | 3 | 251 | 22 | 97 |
| Dec | 67.7 | 976 | 5,007 | 51 | 37 | 96 | 49 | 306 | 20 | 4 | 269 | 25 | 94 |
| 2008[3] March | 71.7[p] | 1,042[p] | 5,252[p] | 50[p] | 35[p] | 86[p] | 47[p] | 301[p] | 20[p] | 3[p] | 269[p] | 24[p] | 93[p] |
| June | 63.8[p] | 927[p] | 4,758[p] | 46[p] | 36[p] | 86[p] | 47[p] | 297[p] | 21[p] | 3[p] | 259[p] | 23[p] | 91[p] |

Note: Figures represent the number of deaths registered in each year up to 1992 and the number of deaths occurring in each year from 1993 to 2005. The number of deaths for 2006 onwards relate to registrations.
The rates by cause of death in this table are based on final underlying cause. For further details see the Explanatory Notes in the 'Report: Death registrations in England and Wales, 2004: causes' in HSQ26.
Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.

1 The Ninth Revision of the International Classification of Diseases, 1975, came into operation in England and Wales on 1 January 1979. The Tenth Revision of the International Classification of Diseases, 1992, came into operation in England and Wales on 1 January 2001. The cause descriptions and codes relate to ICD-10. For changes to this table see 'In Brief', Health Statistics Quarterly 14.
2 Directly age-standardised to the European Standard Population. See Notes to Tables.
3 Death rates for 2008 are provisional and based on the 2006-based population projections for 2008.
p Provisional.

**Table 6.3 continued** **Deaths: selected causes (International Classification)[1] and sex**

England and Wales

Age-standardised rates[2] per million population for selected causes

| Malignant neoplasms | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prostate | Bladder | Leukaemia | Diabetes mellitus | Ischaemic heart disease | Cerebro vascular diseases | Pneumonia | Bronchitis, emphysema and other chronic obstructive pulmonary disease | Asthma | Gastric and duodenal ulcer | Diseases of the liver | Land transport accidents | Intentional self-harm and events of undetermined intent | Year and quarter |
| (C61) | (C67) | (C91–C95) | (E10–E14) | (I20–I25) | (I60–I69) | (J12–J18) | (J40–J44) | (J45–J46) | (K25–K27) | (K70–K76) | (V01–V89) | (X60–X84, Y10–Y34) | |
| | | | | | | | | | | | | | **Males** |
| 198 | 124 | 74 | 82 | 3,801 | 1,541 | 920 | 944 | 21 | 107 | 41 | 209 | 124 | 1971 |
| 214 | 121 | 74 | 82 | 3,664 | 1,141 | 1,053 | 683 | 28 | 90 | 58 | 119 | 151 | 1981 |
| 304 | 121 | 77 | 131 | 2,984 | 940 | 391 | 606 | 31 | 73 | 76 | 125 | 160 | 1991 |
| 277 | 99 | 67 | 94 | 2,215 | 706 | 720 | 463 | 18 | 60 | 115 | 86 | 152 | 1998 |
| 272 | 93 | 67 | 94 | 2,095 | 673 | 770 | 474 | 18 | 64 | 119 | 86 | 151 | 1999 |
| 260 | 92 | 67 | 88 | 1,959 | 622 | 735 | 416 | 17 | 59 | 119 | 86 | 141 | 2000 |
| 274 | 93 | 70 | 94 | 1,872 | 690 | 388 | 403 | 16 | 55 | 139 | 86 | 134 | 2001 |
| 271 | 90 | 68 | 91 | 1,784 | 690 | 388 | 396 | 15 | 56 | 144 | 83 | 131 | 2002 |
| 273 | 87 | 71 | 91 | 1,703 | 662 | 408 | 411 | 14 | 53 | 157 | 84 | 129 | 2003 |
| 267 | 85 | 67 | 83 | 1,566 | 595 | 360 | 364 | 15 | 50 | 151 | 77 | 125 | 2004 |
| 256 | 80 | 67 | 79 | 1,470 | 555 | 353 | 368 | 12 | 46 | 156 | 75 | 118 | 2005 |
| 250 | 81 | 68 | 74 | 1,353 | 520 | 320 | 343 | 10 | 45 | 161 | 83 | 123 | 2006 |
| 247 | 81 | 66 | 71 | 1,280 | 481 | 303 | 337 | 11 | 39 | 162 | 79 | 119 | 2007 |
| 256 | 79 | 73 | 86 | 1,543 | 611 | 434 | 440 | 11 | 52 | 158 | 83 | 128 | 2006 March |
| 249 | 81 | 63 | 75 | 1,351 | 506 | 318 | 351 | 10 | 48 | 164 | 90 | 117 | June |
| 241 | 83 | 67 | 66 | 1,210 | 454 | 242 | 271 | 11 | 41 | 158 | 77 | 112 | Sept |
| 252 | 80 | 69 | 71 | 1,312 | 509 | 287 | 312 | 8 | 41 | 164 | 82 | 134 | Dec |
| 252 | 83 | 66 | 77 | 1,442 | 541 | 395 | 433 | 11 | 44 | 178 | 84 | 115 | 2007 March |
| 246 | 80 | 69 | 65 | 1,249 | 465 | 286 | 311 | 11 | 37 | 154 | 77 | 121 | June |
| 233 | 78 | 61 | 65 | 1,146 | 429 | 226 | 265 | 9 | 35 | 152 | 73 | 116 | Sept |
| 257 | 82 | 69 | 75 | 1,287 | 489 | 306 | 339 | 11 | 40 | 167 | 82 | 125 | Dec |
| 239[P] | 75[P] | 64[P] | 75[P] | 1,324[P] | 514[P] | 363[P] | 412[P] | 11[P] | 47[P] | 164[P] | 67[P] | 107[P] | 2008 March |
| 228[P] | 78[P] | 65[P] | 72[P] | 1,191[P] | 453[P] | 283[P] | 321[P] | 8[P] | 39[P] | 160[P] | 70[P] | 121[P] | June |
| | | | | | | | | | | | | | **Females** |
| : | 32 | 47 | 89 | 1,668 | 1,352 | 624 | 193 | 25 | 44 | 31 | 82 | 84 | 1971 |
| : | 35 | 47 | 66 | 1,601 | 1,012 | 740 | 155 | 30 | 57 | 43 | 41 | 81 | 1981 |
| : | 34 | 44 | 95 | 1,407 | 812 | 325 | 211 | 30 | 46 | 49 | 45 | 51 | 1991 |
| : | 32 | 41 | 65 | 1,055 | 645 | 546 | 226 | 22 | 41 | 64 | 28 | 43 | 1998 |
| : | 30 | 45 | 65 | 986 | 629 | 591 | 241 | 22 | 39 | 67 | 28 | 45 | 1999 |
| : | 31 | 39 | 62 | 907 | 577 | 546 | 216 | 20 | 41 | 68 | 24 | 45 | 2000 |
| : | 29 | 41 | 62 | 878 | 620 | 307 | 220 | 19 | 39 | 77 | 23 | 40 | 2001 |
| : | 30 | 43 | 65 | 843 | 616 | 316 | 224 | 20 | 37 | 79 | 24 | 41 | 2002 |
| : | 30 | 39 | 66 | 811 | 606 | 337 | 244 | 20 | 36 | 81 | 24 | 41 | 2003 |
| : | 28 | 39 | 60 | 736 | 548 | 296 | 214 | 17 | 35 | 78 | 20 | 38 | 2004 |
| : | 28 | 39 | 57 | 686 | 519 | 298 | 224 | 17 | 32 | 81 | 22 | 38 | 2005 |
| : | 29 | 36 | 54 | 629 | 478 | 261 | 213 | 16 | 29 | 87 | 24 | 39 | 2006 |
| : | 27 | 38 | 53 | 592 | 455 | 251 | 218 | 14 | 26 | 87 | 23 | 35 | 2007 |
| : | 29 | 42 | 60 | 733 | 551 | 371 | 283 | 19 | 37 | 87 | 25 | 40 | 2006 March |
| : | 27 | 34 | 56 | 637 | 477 | 259 | 214 | 16 | 27 | 85 | 27 | 37 | June |
| : | 29 | 35 | 51 | 562 | 427 | 186 | 163 | 13 | 27 | 86 | 21 | 41 | Sept |
| : | 29 | 35 | 51 | 585 | 459 | 231 | 193 | 16 | 25 | 89 | 23 | 38 | Dec |
| : | 29 | 40 | 58 | 689 | 517 | 353 | 298 | 18 | 28 | 96 | 23 | 33 | 2007 March |
| : | 29 | 36 | 49 | 569 | 439 | 228 | 204 | 14 | 27 | 86 | 27 | 31 | June |
| : | 24 | 34 | 50 | 520 | 399 | 178 | 156 | 12 | 24 | 80 | 22 | 35 | Sept |
| : | 26 | 41 | 56 | 591 | 464 | 249 | 217 | 14 | 26 | 86 | 20 | 39 | Dec |
| : | 29[P] | 36[P] | 54[P] | 613[P] | 487[P] | 320[P] | 262[P] | 17[P] | 28[P] | 90[P] | 20[P] | 33[P] | 2008[3] March |
| : | 27[P] | 36[P] | 51[P] | 547[P] | 432[P] | 237[P] | 206[P] | 14[P] | 26[P] | 85[P] | 22[P] | 39[P] | June |

See notes opposite.

# Report:

# Infant and perinatal mortality in England and Wales by social and biological factors, 2007

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## Introduction

This report presents statistics on stillbirths and infant deaths registered in England and Wales that occurred in 2007. Only infant deaths that have been linked to their corresponding birth records are included as linkage enables analysis of infant and perinatal deaths by risk factors collected at birth registration. These include birthweight, mother's age at birth of child, mother's country of birth, marital status, parity and father's socio-economic status based on his occupation.

In 2007, 3,266 infant deaths occurred in England and Wales of which 3,185 (98 per cent) were linked to their birth records. Of the 81 records that were not linked, 31 were born outside England and Wales (and were therefore not registered in England and Wales) and 50 were not linked because no record of the birth could be found. The linkage rate for 2007 is comparable with that for previous years since linkage began in 1975.

In 2007, of all the linked infant deaths 1,710 (54 per cent) were early neonates (babies dying aged under 7 days), 2,201 (69 per cent) were neonatal deaths (babies dying aged under 28 days) and 984 (31 per cent) were postneonatal deaths (babies dying aged 28 days and over but under one year).

## Key findings

- The infant mortality rates for very low birthweight babies (under 1,500 grams) and low birthweight babies (under 2,500 grams) were 177.5 and 38.2 deaths per 1,000 live births respectively compared with a rate of 1.8 among normal birthweight babies (2,500 grams and over). Forty-four per cent of infant deaths occurred among very low birthweight babies

- There were 830 stillbirths weighing less than 1,500 grams delivered at 24–27 weeks gestation. This represented 94 per cent of all stillbirths delivered at 24–27 weeks and 55 per cent of all very low birthweight stillbirths

- The infant mortality rate was highest among babies of mothers aged under 20 (7.2 deaths per 1,000 live births) followed by babies of mothers aged 20–24 (5.3 per 1,000 live births). The infant mortality rate was lowest among babies with mothers in the 30–34 age group (4.0 per 1,000 live births)

- Babies of mothers aged 40 and over had the highest stillbirth and perinatal mortality rates at 7.7 and 10.3 per 1,000 births respectively

- Babies of mothers born in Pakistan had a particularly high infant mortality rate (9.1 deaths per 1,000 live births) compared with the overall infant mortality rate of 4.6 per 1,000 live births. The stillbirth and the perinatal mortality rates were also particularly high in babies of mothers born in Pakistan and babies of mothers born in the Caribbean

- The registration types with the highest infant mortality rates were births outside marriage jointly registered by both parents giving different addresses (6.5 deaths per 1,000 live births) and sole registered births (6.3 per 1,000 live births)

- Babies born inside marriage to women with three or more previous children had a high infant mortality at 6.1 deaths per 1,000 live births

- For births inside marriage combined with births outside marriage jointly registered by both parents, babies of fathers in 'routine occupations' had an infant mortality rate of 5.8 deaths per 1,000 live births compared with babies of fathers in the 'large employers and higher managerial occupations' who had an infant mortality rate of 2.8 per 1,000 live births

- Seventy-two per cent of all infant deaths were related to events occurring in pregnancy (that is, congenital anomalies, antepartum infections and immaturity related conditions) as were 86 per cent of all neonatal deaths. For postneonatal deaths, 29 per cent were related to congenital anomalies, 16 per cent were sudden infant deaths, 14 per cent were from infections, and 11 per cent were from immaturity related conditions

## Explanatory notes

### Database changes

The figures presented in this report relate to live births, stillbirths and infant deaths that occurred in 2007 and were on our database at 18 September 2008. These figures are provisional.

Birthweight information was not available for 1.1 per cent of live births and 2.6 per cent of stillbirths. The information, however, may improve when birth registration records are linked to NHS Numbers for Babies records at a later date.

### National Statistics Socio-economic Classification (NS-SEC)

In 2001, the National Statistics Socio-economic Classification (NS-SEC) replaced the Registrar General's Social Class Classification. Although the eight-class version of NS-SEC is used here, the categories can be aggregated to produce five- and three-class versions of NS-SEC.

### Mother's country of birth

These groupings differ from those used in previous years due to further EU enlargement, and changes affecting some New Commonwealth country groupings.

#### *United Kingdom*

England, Wales, Scotland, Northern Ireland

#### *Elsewhere in United Kingdom*

Channel Islands, Isle of Man, UK (part not stated)

#### *Outside United Kingdom*

**Irish Republic**
Irish Republic, Ireland (part not stated)

**Other European Union**
Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

**Rest of Europe**
All other European countries including Turkey, Russia and former Soviet republics

**Commonwealth**
Australia, Canada and New Zealand

New Commonwealth

**Asia**
Bangladesh, India, Pakistan

**East Africa**
Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia

**Southern Africa**
Botswana, Lesotho, Namibia, South Africa, Swaziland

**Rest of Africa**
Cameroon, The Gambia, Ghana, Mauritius, Nigeria, Seychelles, Sierra Leone

**Far East**
Brunei, Malaysia, Singapore

**Caribbean**
Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St Vincent, Trinidad and Tobago, Turks and Caicos Islands

**Rest of the New Commonwealth**
Cook Islands, Falkland Islands, Fiji, Gibraltar, Kiribati, Maldives, Nauru, Papua New Guinea, St Helena, Solomon Islands, Sri Lanka, Tonga, Tuvalu, Vanuatu, Western Samoa, British Indian Ocean Territory

**Rest of the World and not stated**

## Table 1 Live births, stillbirths and infant deaths by birthweight, 2007

England and Wales

Numbers and rates

| Birthweight (grams) | Numbers | | | | | | Rates[1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Postneonatal | Infant | Stillbirth | Perinatal | Neonatal | Postneonatal | Infant |
| All | 689,893 | 3,600 | 1,710 | 2,201 | 984 | 3,185 | 5.2 | 7.7 | 3.2 | 1.4 | 4.6 |
| Under 1,500 | 7,867 | 1,516 | 910 | 1,138 | 258 | 1,396 | 161.6 | 258.6 | 144.7 | 32.8 | 177.5 |
| 1,500–1,999 | 9,918 | 407 | 107 | 139 | 67 | 206 | 39.4 | 49.8 | 14.0 | 6.8 | 20.8 |
| 2,000–2,499 | 31,555 | 422 | 139 | 181 | 103 | 284 | 13.2 | 17.5 | 5.7 | 3.3 | 9.0 |
| 2,500–2,999 | 114,452 | 432 | 151 | 214 | 188 | 402 | 3.8 | 5.1 | 1.9 | 1.6 | 3.5 |
| 3,000–3,499 | 244,570 | 413 | 128 | 177 | 204 | 381 | 1.7 | 2.2 | 0.7 | 0.8 | 1.6 |
| 3,500 and over | 274,149 | 318 | 151 | 202 | 142 | 344 | 1.2 | 1.7 | 0.7 | 0.5 | 1.3 |
| Not stated | 7,382 | 92 | 124 | 150 | 22 | 172 | 12.3 | 28.9 | 20.3 | 3.0 | 23.3 |

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.

## Table 2 Stillbirths: Gestation by birthweight, 2007

England and Wales

Numbers

| Birthweight (grams) | All | Gestation (weeks) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 24–27 | 28–31 | 32–35 | 36–39 | 40 and over | Not stated |
| All | 3,600 | 881 | 605 | 647 | 897 | 491 | 79 |
| Under 1,000 | 1,046 | 754 | 219 | 43 | 15 | 5 | 10 |
| 1,000–1,499 | 470 | 76 | 256 | 121 | 16 | 1 | – |
| 1,500–1,999 | 407 | 12 | 102 | 213 | 73 | 5 | 2 |
| 2,000–2,499 | 422 | 6 | 14 | 178 | 187 | 35 | 2 |
| 2,500–2,999 | 432 | 3 | 3 | 63 | 274 | 88 | 1 |
| 3,000–3,499 | 413 | 8 | 1 | 14 | 196 | 191 | 3 |
| 3,500 and over | 318 | 10 | 7 | 9 | 125 | 165 | 2 |
| Not stated | 92 | 12 | 3 | 6 | 11 | 1 | 59 |

## Table 3 Live births, stillbirths and infant deaths by mother's age, 2007

England and Wales

Numbers and rates

| Mother's age | Numbers | | | | | | Rates[1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Postneonatal | Infant | Stillbirth | Perinatal | Neonatal | Postneonatal | Infant |
| All | 689,893 | 3,600 | 1,710 | 2,201 | 984 | 3,185 | 5.2 | 7.7 | 3.2 | 1.4 | 4.6 |
| Under 20 | 44,797 | 251 | 158 | 207 | 117 | 324 | 5.6 | 9.1 | 4.6 | 2.6 | 7.2 |
| 20–24 | 130,749 | 693 | 350 | 460 | 228 | 688 | 5.3 | 7.9 | 3.5 | 1.7 | 5.3 |
| 25–29 | 182,544 | 946 | 406 | 522 | 256 | 778 | 5.2 | 7.4 | 2.9 | 1.4 | 4.3 |
| 30–34 | 191,080 | 917 | 446 | 560 | 207 | 767 | 4.8 | 7.1 | 2.9 | 1.1 | 4.0 |
| 35–39 | 115,379 | 597 | 284 | 367 | 138 | 505 | 5.1 | 7.6 | 3.2 | 1.2 | 4.4 |
| 40 and over | 25,344 | 196 | 66 | 85 | 38 | 123 | 7.7 | 10.3 | 3.4 | 1.5 | 4.9 |

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.

## Table 4 Live births, stillbirths and infant deaths by mother's country of birth, 2007

England and Wales

Numbers and rates

| Country of birth | Numbers | | | | | | Rates[1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Postneonatal | Infant | Stillbirth | Perinatal | Neonatal | Postneonatal | Infant |
| All | 689,893 | 3,600 | 1,710 | 2,201 | 984 | 3,185 | 5.2 | 7.7 | 3.2 | 1.4 | 4.6 |
| United Kingdom | 529,594 | 2,513 | 1,268 | 1,639 | 745 | 2,384 | 4.7 | 7.1 | 3.1 | 1.4 | 4.5 |
| England and Wales | 519,384 | 2,464 | 1,249 | 1,615 | 728 | 2,343 | 4.7 | 7.1 | 3.1 | 1.4 | 4.5 |
| Scotland | 7,377 | 35 | 15 | 20 | 12 | 32 | 4.7 | 6.7 | 2.7 | 1.6 | 4.3 |
| Northern Ireland | 2,451 | 12 | 2 | 2 | 1 | 3 | 4.9 | 5.7 | 0.8 | 0.4 | 1.2 |
| Elsewhere | 382 | 2 | 2 | 2 | 4 | 6 | 5.2 | 10.4 | 5.2 | 10.5 | 15.7 |
| Outside the United Kingdom | 160,299 | 1,087 | 442 | 562 | 239 | 801 | 6.7 | 9.5 | 3.5 | 1.5 | 5.0 |
| Irish Republic | 3,226 | 20 | 5 | 8 | 5 | 13 | 6.2 | 7.7 | 2.5 | 1.5 | 4.0 |
| Other European Union | 34,104 | 159 | 61 | 82 | 25 | 107 | 4.6 | 6.4 | 2.4 | 0.7 | 3.1 |
| Rest of Europe | 7,710 | 40 | 16 | 19 | 4 | 23 | 5.2 | 7.2 | 2.5 | 0.5 | 3.0 |
| Commonwealth | | | | | | | | | | | |
| Australia, Canada and New Zealand | 4,707 | 21 | 4 | 5 | 5 | 10 | 4.4 | 5.3 | 1.1 | 1.1 | 2.1 |
| New Commonwealth | 68,650 | 552 | 245 | 310 | 138 | 448 | 8.0 | 11.5 | 4.5 | 2.0 | 6.5 |
| Asia | | | | | | | | | | | |
| Bangladesh | 8,774 | 56 | 23 | 33 | 17 | 50 | 6.3 | 8.9 | 3.8 | 1.9 | 5.7 |
| India | 12,008 | 86 | 32 | 40 | 14 | 54 | 7.1 | 9.8 | 3.3 | 1.2 | 4.5 |
| Pakistan | 17,651 | 175 | 80 | 104 | 56 | 160 | 9.8 | 14.3 | 5.9 | 3.2 | 9.1 |
| East Africa | 4,195 | 20 | 13 | 15 | 11 | 26 | 4.7 | 7.8 | 3.6 | 2.6 | 6.2 |
| Southern Africa | 4,658 | 24 | 16 | 16 | 5 | 21 | 5.1 | 8.5 | 3.4 | 1.1 | 4.5 |
| Rest of Africa | 12,681 | 132 | 62 | 76 | 25 | 101 | 10.3 | 15.1 | 6.0 | 2.0 | 8.0 |
| Far East | 1,328 | 8 | 3 | 4 | – | 4 | 6.0 | 8.2 | 3.0 | – | 3.0 |
| Caribbean | 3,572 | 32 | 10 | 12 | 6 | 18 | 8.9 | 11.7 | 3.4 | 1.7 | 5.0 |
| Rest of the New Commonwealth | 3,783 | 19 | 6 | 10 | 4 | 14 | 5.0 | 6.6 | 2.6 | 1.1 | 3.7 |
| Rest of World and not stated | 41,902 | 295 | 111 | 138 | 62 | 200 | 7.0 | 9.6 | 3.3 | 1.5 | 4.8 |

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.

## Table 5 Live births, stillbirths and infant deaths by marital status, parity (within marriage) and type of registration, 2007

England and Wales

Numbers and rates

| Marital status Parity/type of registration | Numbers | | | | | | Rates[1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Postneonatal | Infant | Stillbirth | Perinatal | Neonatal | Postneonatal | Infant |
| All | 689,893 | 3,600 | 1,710 | 2,201 | 984 | 3,185 | 5.2 | 7.7 | 3.2 | 1.4 | 4.6 |
| Inside marriage | | | | | | | | | | | |
| All | 384,428 | 1,910 | 906 | 1,154 | 455 | 1,609 | 4.9 | 7.3 | 3.0 | 1.2 | 4.2 |
| 0 | 164,759 | 912 | 454 | 574 | 180 | 754 | 5.5 | 8.2 | 3.5 | 1.1 | 4.6 |
| 1 | 134,965 | 537 | 232 | 303 | 132 | 435 | 4.0 | 5.7 | 2.2 | 1.0 | 3.2 |
| 2 | 53,880 | 274 | 117 | 150 | 81 | 231 | 5.1 | 7.2 | 2.8 | 1.5 | 4.3 |
| 3 and over | 30,824 | 187 | 103 | 127 | 62 | 189 | 6.0 | 9.4 | 4.1 | 2.0 | 6.1 |
| Outside marriage | | | | | | | | | | | |
| All | 305,465 | 1,690 | 804 | 1,047 | 529 | 1,576 | 5.5 | 8.1 | 3.4 | 1.7 | 5.2 |
| Joint registration/same address | 198,433 | 1,036 | 494 | 642 | 250 | 892 | 5.2 | 7.7 | 3.2 | 1.3 | 4.5 |
| Joint registration/different address | 61,341 | 331 | 191 | 256 | 141 | 397 | 5.4 | 8.5 | 4.2 | 2.3 | 6.5 |
| Sole registration | 45,691 | 323 | 119 | 149 | 138 | 287 | 7.0 | 9.6 | 3.3 | 3.0 | 6.3 |

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.

## Table 6 Live births,[1] stillbirths and infant deaths by NS-SEC (based on father's occupation at death registration), 2007[2]

England and Wales

Numbers and rates

| NS-SEC | Numbers | | | | | | Rates[3] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Post-neonatal | Infant | Stillbirth | Perinatal | Neonatal | Post-neonatal | Infant |
| All[4] | 644,202 | 3,277 | 1,591 | 2,052 | 846 | 2,898 | 5.1 | 7.5 | 3.2 | 1.3 | 4.5 |
| Inside marriage | | | | | | | | | | | |
| All[5] | 384,428 | 1,910 | 906 | 1,154 | 455 | 1,609 | 4.9 | 7.3 | 3.0 | 1.2 | 4.2 |
| 1.1 Large employers and higher managerial | 3,681 | 123 | 62 | 77 | 21 | 98 | 3.3 | 5.0 | 2.1 | 0.6 | 2.7 |
| 1.2 Higher professional | 5,271 | 237 | 101 | 123 | 40 | 163 | 4.5 | 6.4 | 2.3 | 0.8 | 3.1 |
| 2 Lower managerial and professional | 9,182 | 401 | 179 | 224 | 76 | 300 | 4.3 | 6.3 | 2.4 | 0.8 | 3.3 |
| 3 Intermediate | 2,381 | 120 | 57 | 74 | 34 | 108 | 5.0 | 7.4 | 3.1 | 1.4 | 4.5 |
| 4 Small employers and own-account workers | 4,933 | 209 | 115 | 142 | 50 | 192 | 4.2 | 6.5 | 2.9 | 1.0 | 3.9 |
| 5 Lower supervisory and technical | 4,142 | 175 | 86 | 118 | 39 | 157 | 4.2 | 6.3 | 2.8 | 0.9 | 3.8 |
| 6 Semi-routine | 3,672 | 275 | 124 | 161 | 59 | 220 | 7.4 | 10.8 | 4.4 | 1.6 | 6.0 |
| 7 Routine | 3,425 | 220 | 102 | 138 | 77 | 215 | 6.4 | 9.3 | 4.0 | 2.2 | 6.3 |
| Other[6] | 1,728 | 150 | 74 | 90 | 49 | 139 | 8.6 | 12.9 | 5.2 | 2.8 | 8.0 |
| Outside marriage joint registration | | | | | | | | | | | |
| All[5] | 259,774 | 1,367 | 685 | 898 | 391 | 1,289 | 5.2 | 7.9 | 3.5 | 1.5 | 5.0 |
| 1.1 Large employers and higher managerial | 994 | 34 | 23 | 26 | 7 | 33 | 3.4 | 5.7 | 2.6 | 0.7 | 3.3 |
| 1.2 Higher professional | 1,168 | 60 | 25 | 32 | 13 | 45 | 5.1 | 7.2 | 2.7 | 1.1 | 3.9 |
| 2 Lower managerial and professional | 3,937 | 181 | 73 | 100 | 37 | 137 | 4.6 | 6.4 | 2.5 | 0.9 | 3.5 |
| 3 Intermediate | 1,309 | 62 | 27 | 33 | 18 | 51 | 4.7 | 6.8 | 2.5 | 1.4 | 3.9 |
| 4 Small employers and own-account workers | 3,772 | 161 | 94 | 118 | 33 | 151 | 4.3 | 6.7 | 3.1 | 0.9 | 4.0 |
| 5 Lower supervisory and technical | 4,098 | 181 | 93 | 123 | 45 | 168 | 4.4 | 6.7 | 3.0 | 1.1 | 4.1 |
| 6 Semi-routine | 3,643 | 214 | 118 | 153 | 64 | 217 | 5.8 | 9.1 | 4.2 | 1.8 | 6.0 |
| 7 Routine | 5,058 | 316 | 157 | 199 | 78 | 277 | 6.2 | 9.3 | 3.9 | 1.5 | 5.5 |
| Other[6] | 2,053 | 157 | 60 | 97 | 82 | 179 | 7.6 | 10.5 | 4.7 | 4.0 | 8.7 |

1 Figures for live births in NS-SEC groups are a 10 per cent sample coded for father's occupation.
2 Information on father's occupation is not collected for births outside marriage if the father does not attend the registration of the baby's birth.
3 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.
4 Inside marriage and outside marriage/joint registration only, including cases where father's occupation was not stated.
5 Includes cases where father's occupation was not stated.
6 Students, occupations inadequately described, occupations not classifiable for other reasons, never worked and long-term unemployed.

## Table 7 Live births, stillbirths and infant deaths by ONS cause groups, 2007

England and Wales

Numbers and rates

| Cause group | Numbers | | | | | | Rates[1] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Births | | Deaths | | | | | | | | |
| | Live births | Stillbirths | Early neonatal | Neonatal | Post-neonatal | Infant | Stillbirth | Perinatal | Neonatal | Post-neonatal | Infant |
| All causes | 689,893 | 3,600 | 1,710 | 2,201 | 984 | 3,185 | 5.2 | 7.7 | 3.2 | 1.4 | 4.6 |
| Congenital anomalies | | 557 | 413 | 595 | 287 | 882 | 0.8 | 1.4 | 0.9 | 0.4 | 1.3 |
| Antepartum infections | | 31 | 33 | 64 | 3 | 67 | – | 0.1 | 0.1 | – | 0.1 |
| Immaturity related conditions | | : | 1,021 | 1,236 | 110 | 1,346 | : | 1.5 | 1.8 | 0.2 | 2.0 |
| Asphyxia, anoxia or trauma (intrapartum) | | 91 | 202 | 222 | 23 | 245 | 0.1 | 0.4 | 0.3 | – | 0.4 |
| External conditions | | 7 | 2 | 6 | 39 | 45 | – | – | – | 0.1 | 0.1 |
| Infections | | : | 10 | 26 | 140 | 166 | : | – | – | 0.2 | 0.2 |
| Other specific conditions | | 202 | 14 | 19 | 27 | 46 | 0.3 | 0.3 | – | – | 0.1 |
| Asphyxia, anoxia or trauma (antepartum) | | 913 | : | : | : | : | 1.3 | 1.3 | : | : | : |
| Remaining antepartum deaths | | 1,733 | : | : | : | : | 2.5 | 2.5 | : | : | : |
| Sudden infant deaths | | : | 3 | 12 | 155 | 167 | : | – | – | 0.2 | 0.2 |
| Other conditions | | 66 | 12 | 21 | 200 | 221 | 0.1 | 0.1 | – | 0.3 | 0.3 |

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.
: not applicable.
– less than 0.05.

# Report:

# Excess winter mortality in England and Wales, 2007/08 (provisional) and 2006/07 (final)

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## Introduction

This report analyses provisional estimated figures for excess winter mortality (EWM) for the winter period 2007/08, and final figures for the winter period 2006/07 for deaths occurring in England and Wales. Historical trends in EWM are presented for people in England and Wales from 1950/51 to 2007/08. Figures by sex and age for the Government Office Regions of England, and Wales are presented for the five-year period 2003/04 to 2007/08, and by cause of death from 2004/05 to 2006/07.

Due to difficulties experienced with the introduction of a new system for registering deaths during 2007, this report was not published last year. However, provisional EWM figures for the winter period 2006/07 and final figures for 2005/06 were published on the Office for National Statistics website. Monthly mortality data for deaths occurring in 2006 were not published so this report contains monthly mortality data for both 2006 and 2007 in the appendices.

## Background

England and Wales experiences higher levels of mortality in the winter than in the summer. A measure of this increase is provided on an annual basis, in the form of the excess winter mortality (EWM) figure and index. The elderly are more vulnerable than others during the winter and these figures are used to monitor health targets at a national and local level. Policies aimed at tackling EWM, such as winter fuel payments[1] and influenza vaccinations,[2] particularly focus on the elderly. Although EWM is associated with low temperatures, conditions directly relating to cold, such as hypothermia, are not the main cause of excess winter mortality. A previous article[3] on EWM showed that circulatory and respiratory diseases exhibited marked seasonal fluctuations, with deaths from respiratory illnesses having the largest percentage seasonal increase.

## Method

Excess winter mortality (EWM) is calculated by comparing the number of deaths occurring in winter with the number occurring in a non-winter period. Previous analysis compared methods of calculating EWM using different winter and non-winter periods.[3] The method for calculating EWM used in this report can be found in Box One.

### Box one

#### Method for calculating excess winter mortality

The current ONS standard method defines the winter period as December to March, and compares the number of deaths which occurred in this winter period with the average number of deaths occurring in the preceding August to November and the following April to July:

EWM = winter deaths – average non-winter deaths

This produces a number of excess winter deaths which is rounded to the nearest 10 for final data and to the nearest 100 for provisional data.

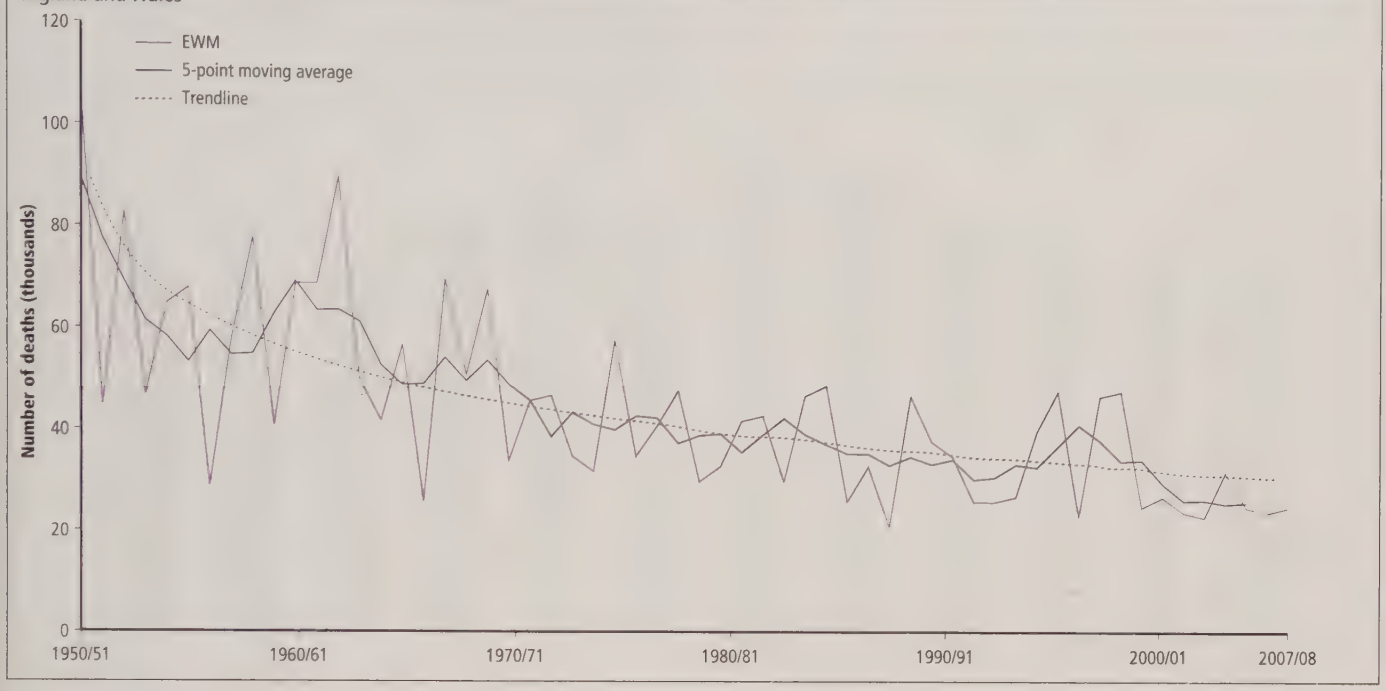
The EWM index is calculated so that comparisons can be made between sexes, age groups and regions. It is calculated as the number of excess winter deaths divided by the average non-winter deaths, expressed as a percentage:

EWM Index = (EWM / average non-winter deaths) * 100

The EWM index is presented with 95 per cent confidence intervals in this report.

Mortality data are collected from death registration. Most deaths (over 95 per cent) are registered within one month of the date of occurrence, although violent or unexpected deaths, which need further investigation from a coroner, can take much longer. So that timely EWM figures can be produced, ONS produces a special extract of mortality data in September for deaths which were registered by this month but which occurred up to the end of July. These figures are then adjusted using the number of deaths from the previous year's extract, compared with the final number. This produces a provisional estimated number of deaths for January to July in the current year so that EWM can be calculated for the previous winter. As these figures are provisional, they are rounded to the nearest 100 and are not produced for areas smaller than Government Office Region, or by cause of death. Appendix A and Appendix B at

**Figure 1** Excess winter mortality and smoothed EWM with trendline, 1950/51 to 2007/08




the end of this report contain mortality data by age, sex, area of usual residence (that is, Government Office Regions of England, and Wales), and month of occurrence from January to December 2006. Appendix C and Appendix D present equivalent data for January to December 2007.

## Results

### Total excess winter mortality in England and Wales

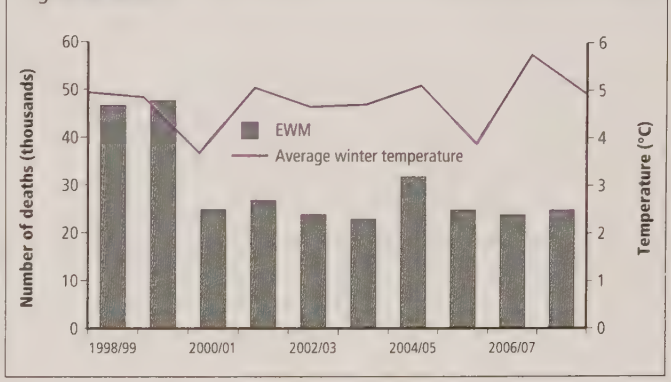
Figure 1 shows EWM in England and Wales from the winter of 1950/51 to 2007/08. There has been a log-linear decrease over time, showing a general downward trend in EWM over a period of years rather than in any particular time period.

In the four months of winter 2007/08 there were an estimated 25,300 more deaths in England and Wales than in the non-winter period. This was more than in the previous winter, and similar to the winter of 2005/06, but not as many as in the winter of 2004/05. There were just over 1,500 more excess winter deaths in 2007/08 than in 2006/07, an increase of 7 per cent.

The number of extra deaths occurring in winter varies depending on temperature and the level of disease (particularly influenza) in the population, as well as other factors. Figure 2 shows that the increase in EWM between 2006/07 and 2007/08 corresponded with a decrease in the average temperature across the winter period. However, when monthly mortality data for 2007/08 were compared with the five-year average between 2002/03 and 2006/07 (Figure 3), no winter month reported a higher number of deaths than the five-year average and only December and March had a lower mean monthly temperature.

When daily deaths for the period 1 August 2007 to 31 July 2008 are compared with the five-year average for 2002/03 to 2006/07 (Figure 4), there were far fewer deaths than average from February to mid-March. During the winter period, only on some days during December and early January did the number of deaths exceed the average number for the previous five years. The lower number of deaths in February 2008 may be related to the very mild temperatures experienced during this month.[4]

**Figure 2** Excess winter mortality and average winter temperature, 1998/99 to 2007/08




### Excess winter mortality by sex and age

Figure 5 shows the numbers of excess winter deaths by sex and age in England and Wales for 2005/06 to 2007/08.

In 2007/08, there were 11,100 and 14,200 excess winter deaths in males and females respectively. The majority of these deaths occurred amongst the elderly (aged 75 and over) in both sexes, although proportions varied by sex. Among those aged under 75, there were more excess winter deaths in males than females with a male:female ratio of 1.68. In those aged 75 and over, there were more excess winter deaths in women than men, with a male:female ratio of 0.62. A greater number, and higher proportion, of the female population is elderly (9 per cent of females were aged 75 and over compared with 6 per cent of males in 2007), which may wholly, or partially, account for the higher number of excess winter deaths in women.

There were more excess winter deaths for males in 2007/08 than in the previous two winters (2005/06 and 2006/07), but fewer among females. In 2007/08, overall EWM for males was 18 per cent higher than in the

**Figure 3** Monthly deaths and mean monthly temperature, August 2007 to July 2008

England and Wales

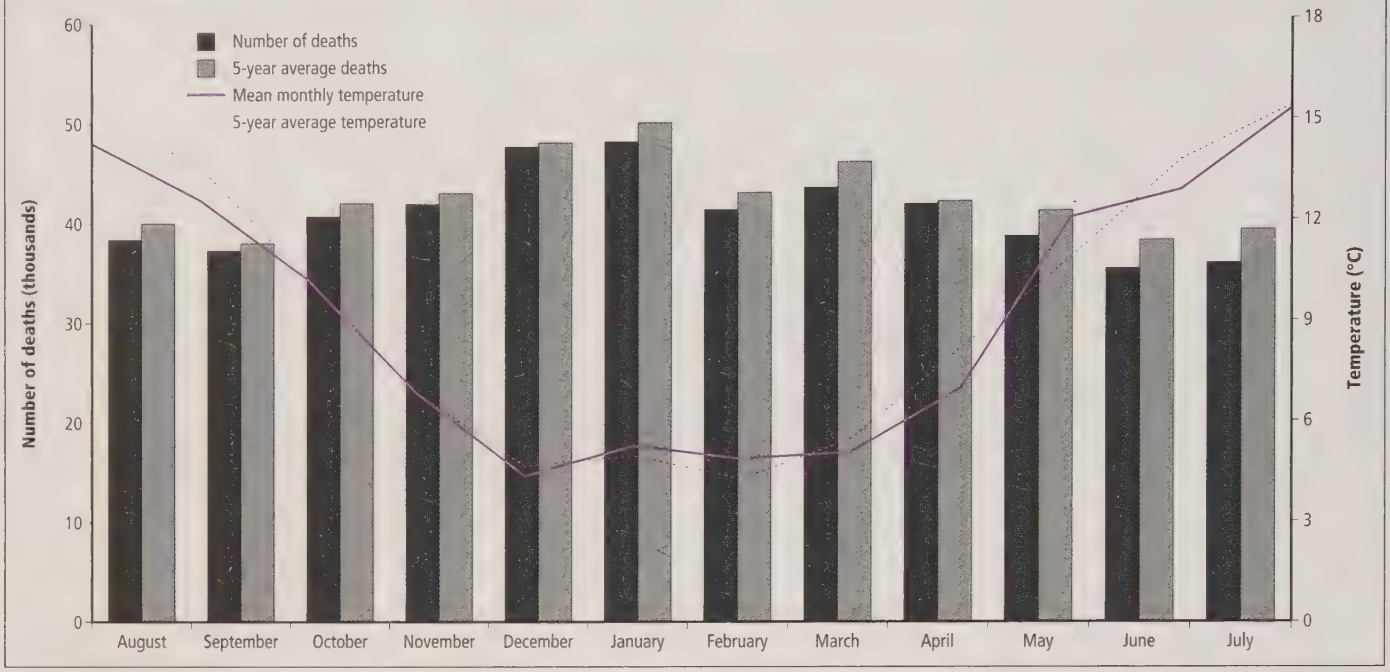



**Figure 4** Daily deaths (five-day moving average) for 2007/08 and five-year average for 2002/03 to 2006/07

England and Wales

winter of 2006/07. The majority of this increase was in males aged under 65 where the number tripled: deaths in this age group accounted for 17 per cent of all excess deaths in 2007/08 compared with 6 per cent in 2006/07. This was the highest proportion of excess winter deaths seen in this age group. For females in 2007/08, overall EWM decreased by 1 per cent compared with 2006/07. Numbers fell in all age groups except females aged under 65 where the number increased by 64 per cent. However, due to the smaller proportion of deaths which occur at this age in females, this had little effect on the overall decrease in EWM.

## Excess winter mortality for Government Office Regions of England, and Wales

Table 1 presents EWM and the EWM index by age for Government Office Regions of England, and Wales. There are substantial year-on-year changes in the rank order of regions for EWM – for example, the South East had the highest EWM index in the winter of 2005/06 and the lowest EWM index for the following winter of 2006/07. Previous research[5] examining EWM among the elderly found little evidence for any consistent variation by geographical region within the UK.

**Table 1** Excess winter mortality by age group and usual residence of deceased, 2003/04 to 2007/08

Government Office Regions of England, Wales

| | | 2003/04 | | 2004/05 | | 2005/06 | | 2006/07 | | 2007/08 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | EWM[1] | EWM Index | EWM[1] | EWM Index | EWM[1] | EWM Index | EWM[1] | EWM Index | EWM[2] | EWM Index |
| England, Wales and elsewhere | 0–64 | 1,570 | 5.4 | 2,460 | 8.7 | 1,960 | 6.9 | 1,190 | 4.2 | 2,900 | 11.1 |
| | 65–74 | 3,140 | 10.6 | 4,000 | 14.1 | 2,930 | 10.7 | 3,120 | 11.9 | 3,000 | 11.8 |
| | 75–84 | 8,590 | 15.0 | 10,810 | 19.7 | 8,030 | 15.3 | 7,730 | 15.3 | 7,500 | 14.9 |
| | 85+ | 10,160 | 19.4 | 14,380 | 28.3 | 12,340 | 23.7 | 11,700 | 22.2 | 11,900 | 21.5 |
| | All ages | 23,450 | 13.9 | 31,640 | 19.5 | 25,270 | 15.8 | 23,740 | 15.0 | 25,300 | 16.1 |
| North East | 0–64 | 60 | 3.7 | 50 | 3.3 | 120 | 8.1 | 90 | 5.4 | 200 | 15.7 |
| | 65–74 | 200 | 10.7 | 210 | 11.5 | 140 | 8.3 | 370 | 24.2 | 200 | 14.4 |
| | 75–84 | 570 | 17.7 | 480 | 15.2 | 350 | 11.8 | 540 | 19.4 | 400 | 15.0 |
| | 85+ | 370 | 15.8 | 730 | 31.7 | 470 | 19.3 | 510 | 20.7 | 700 | 26.2 |
| | All ages | 1,190 | 13.2 | 1,460 | 16.6 | 1,080 | 12.6 | 1,510 | 18.0 | 1,500 | 18.4 |
| North West | 0–64 | 320 | 7.4 | 520 | 12.1 | 260 | 6.0 | 150 | 3.5 | 400 | 9.6 |
| | 65–74 | 500 | 11.3 | 750 | 17.7 | 300 | 7.3 | 490 | 12.1 | 500 | 11.6 |
| | 75–84 | 1,390 | 17.5 | 1,520 | 19.9 | 1,140 | 15.5 | 1,070 | 15.2 | 900 | 13.6 |
| | 85+ | 1,340 | 20.3 | 1,650 | 25.8 | 1,300 | 19.6 | 1,710 | 25.6 | 1,700 | 23.9 |
| | All ages | 3,560 | 15.2 | 4,440 | 19.7 | 3,000 | 13.4 | 3,430 | 15.5 | 3,400 | 15.8 |
| Yorkshire and The Humber | 0–64 | 290 | 10.2 | 260 | 9.1 | 240 | 8.7 | 150 | 5.3 | 400 | 13.5 |
| | 65–74 | 370 | 12.4 | 410 | 14.2 | 240 | 8.7 | 340 | 12.8 | 300 | 10.1 |
| | 75–84 | 940 | 16.4 | 1,270 | 23.6 | 580 | 10.9 | 770 | 14.9 | 800 | 16.0 |
| | 85+ | 1,110 | 22.3 | 1,320 | 27.5 | 1,010 | 20.6 | 1,070 | 21.0 | 1,100 | 20.7 |
| | All ages | 2,710 | 16.4 | 3,250 | 20.5 | 2,070 | 13.1 | 2,330 | 14.7 | 2,500 | 16.1 |
| East Midlands | 0–64 | 160 | 6.9 | 140 | 5.8 | 170 | 7.5 | 120 | 5.0 | 100 | 6.7 |
| | 65–74 | 240 | 9.7 | 340 | 14.4 | 240 | 10.6 | 270 | 12.4 | 200 | 8.4 |
| | 75–84 | 750 | 15.9 | 860 | 18.9 | 690 | 15.4 | 640 | 14.9 | 600 | 15.3 |
| | 85+ | 850 | 20.4 | 1,130 | 28.0 | 880 | 20.6 | 980 | 23.1 | 800 | 17.4 |
| | All ages | 1,990 | 14.6 | 2,460 | 18.6 | 1,990 | 14.9 | 2,010 | 15.4 | 1,800 | 13.5 |
| West Midlands | 0–64 | 290 | 9.4 | 290 | 9.7 | 50 | 1.7 | 180 | 5.9 | 300 | 11.7 |
| | 65–74 | 270 | 8.5 | 430 | 14.2 | 490 | 17.0 | 400 | 14.3 | 500 | 17.9 |
| | 75–84 | 860 | 14.4 | 1,240 | 21.7 | 960 | 17.5 | 1,020 | 19.3 | 900 | 16.6 |
| | 85+ | 1,140 | 23.0 | 1,630 | 33.0 | 1,210 | 23.6 | 1,060 | 20.5 | 1,200 | 22.4 |
| | All ages | 2,560 | 14.9 | 3,590 | 21.5 | 2,710 | 16.3 | 2,670 | 16.3 | 2,900 | 17.9 |
| East of England | 0–64 | 50 | 2.0 | 210 | 8.2 | 240 | 9.2 | 150 | 5.5 | 400 | 15.7 |
| | 65–74 | 390 | 14.0 | 420 | 15.6 | 350 | 13.5 | 260 | 10.4 | 200 | 9.5 |
| | 75–84 | 840 | 14.3 | 1,120 | 19.7 | 820 | 15.0 | 860 | 16.2 | 800 | 15.0 |
| | 85+ | 990 | 17.1 | 1,540 | 27.9 | 1,400 | 24.1 | 1,310 | 22.9 | 1,400 | 22.7 |
| | All ages | 2,280 | 13.3 | 3,290 | 20.0 | 2,810 | 17.0 | 2,570 | 15.9 | 2,800 | 17.1 |
| London | 0–64 | 40 | 1.2 | 370 | 10.5 | 260 | 7.4 | 120 | 3.5 | 400 | 14.3 |
| | 65–74 | 270 | 8.3 | 340 | 11.5 | 230 | 8.2 | 220 | 8.1 | 300 | 11.4 |
| | 75–84 | 720 | 12.6 | 1,150 | 21.5 | 770 | 15.1 | 650 | 13.5 | 800 | 17.6 |
| | 85+ | 1,010 | 18.6 | 1,580 | 31.3 | 1,300 | 26.1 | 1,080 | 21.8 | 1,200 | 23.1 |
| | All ages | 2,040 | 11.3 | 3,440 | 20.4 | 2,560 | 15.6 | 2,070 | 13.0 | 2,800 | 17.7 |
| South East | 0–64 | 210 | 5.3 | 310 | 8.2 | 260 | 6.8 | – | 0.1 | 300 | 8.8 |
| | 65–74 | 370 | 9.3 | 430 | 11.2 | 570 | 15.6 | 250 | 7.2 | 400 | 10.2 |
| | 75–84 | 1,140 | 13.5 | 1,500 | 18.4 | 1,470 | 19.2 | 1,080 | 14.8 | 900 | 12.6 |
| | 85+ | 1,580 | 17.9 | 2,350 | 27.4 | 2,380 | 27.3 | 1,690 | 19.2 | 2,000 | 21.1 |
| | All ages | 3,310 | 13.1 | 4,590 | 18.8 | 4,680 | 19.6 | 3,030 | 12.9 | 3,600 | 15.0 |
| South West | 0–64 | 90 | 3.4 | 170 | 7.0 | 160 | 6.4 | 160 | 6.3 | 200 | 10.3 |
| | 65–74 | 230 | 8.6 | 380 | 15.0 | 180 | 7.1 | 330 | 13.8 | 400 | 17.6 |
| | 75–84 | 890 | 15.2 | 1,010 | 17.8 | 810 | 14.9 | 650 | 12.4 | 700 | 12.8 |
| | 85+ | 1,080 | 17.1 | 1,650 | 27.0 | 1,700 | 28.3 | 1,640 | 26.2 | 1,300 | 19.1 |
| | All ages | 2,290 | 13.1 | 3,220 | 19.2 | 2,840 | 17.3 | 2,780 | 16.9 | 2,600 | 15.7 |
| Wales | 0–64 | 70 | 3.6 | 140 | 8.0 | 200 | 11.9 | 100 | 5.5 | 100 | 8.5 |
| | 65–74 | 310 | 16.4 | 300 | 16.2 | 210 | 11.6 | 210 | 12.4 | 100 | 8.3 |
| | 75–84 | 480 | 13.2 | 670 | 18.9 | 460 | 13.8 | 460 | 14.2 | 600 | 18.1 |
| | 85+ | 700 | 22.4 | 810 | 26.3 | 690 | 22.3 | 640 | 19.5 | 700 | 20.4 |
| | All ages | 1,550 | 14.9 | 1,930 | 18.8 | 1,560 | 15.7 | 1,400 | 14.1 | 1,500 | 15.6 |
| England | 0–64 | 1,510 | 5.6 | 2,320 | 8.8 | 1,760 | 6.7 | 1,120 | 4.2 | 2,800 | 11.5 |
| | 65–74 | 2,850 | 10.3 | 3,700 | 14.1 | 2,750 | 10.8 | 2,940 | 12.1 | 2,900 | 12.1 |
| | 75–84 | 8,110 | 15.2 | 10,150 | 19.8 | 7,580 | 15.4 | 7,280 | 15.4 | 6,900 | 14.7 |
| | 85+ | 9,460 | 19.2 | 13,570 | 28.5 | 11,650 | 23.8 | 11,050 | 22.4 | 11,200 | 21.6 |
| | All ages | 21,930 | 13.9 | 29,740 | 19.6 | 23,740 | 15.8 | 22,380 | 15.2 | 23,800 | 16.2 |
| England and Wales | 0–64 | 1,570 | 5.4 | 2,460 | 8.8 | 1,910 | 6.7 | 1,270 | 4.4 | 2,900 | 11.3 |
| | 65–74 | 3,160 | 10.7 | 4,000 | 14.2 | 2,940 | 10.5 | 3,270 | 12.2 | 3,000 | 11.9 |
| | 75–84 | 8,590 | 15.0 | 10,820 | 19.7 | 8,390 | 15.4 | 7,930 | 15.1 | 7,500 | 15.0 |
| | 85+ | 10,160 | 19.4 | 14,390 | 28.3 | 13,350 | 24.3 | 12,680 | 22.8 | 11,900 | 21.5 |
| | All ages | 23,480 | 14.0 | 31,670 | 19.6 | 26,580 | 16.0 | 25,160 | 15.3 | 25,300 | 16.2 |

1 Rounded to the nearest 10.
2 Provisional, rounded to the nearest 100.

**Figure 5** Excess winter mortality by sex and age, 2005/06, 2006/07 and 2007/08

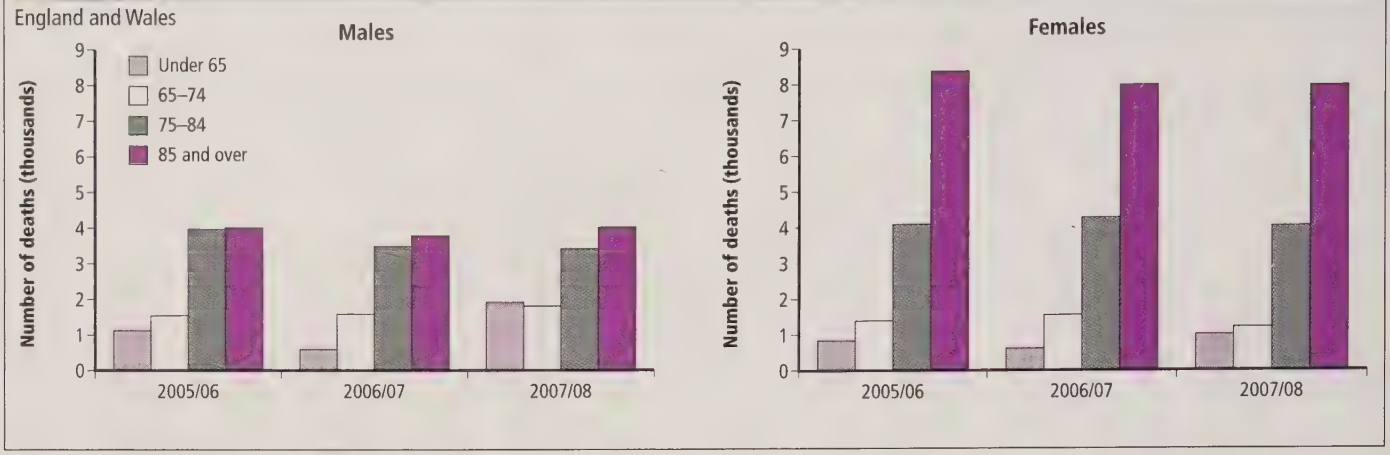



Figure 6 shows the EWM index for Government Office Regions of England, and Wales, for the winters of 2005/06 to 2007/08. The EWM index was significantly higher in 2007/08 than the previous winter for the Yorkshire and The Humber, West Midlands, East of England, London and South East regions of England, and Wales. However, the East Midlands and South West regions of England had significantly lower EWM indexes than the previous winter. The North East region had the highest EWM index for 2007/08 but London had the greatest percentage point increase between 2006/07 and 2007/08 (4.7 percentage points). The region with the lowest EWM index in 2007/08 was the East Midlands.

## Excess winter mortality by underlying cause of death

Figure 7 shows EWM and the EWM index for circulatory diseases, respiratory diseases, external causes of injury and poisoning, and cancers (all neoplasms) for the winters of 2004/05 to 2006/07. Although cancers account for a quarter of all deaths annually, previous research[3] found that there was no clear seasonal pattern for these deaths which accounts for the low EWM and EWM index for these causes seen in Figure 7. Injury and poisoning deaths, however, include accidental falls which can be affected by wintry conditions – for example, icy pavements, and the EWM index was 9 per cent for this in 2004/05 where very wintry conditions were seen during February.

**Figure 6** Excess winter mortality by Government Office Region of England, and Wales, 2005/06, 2006/07 and 2007/08

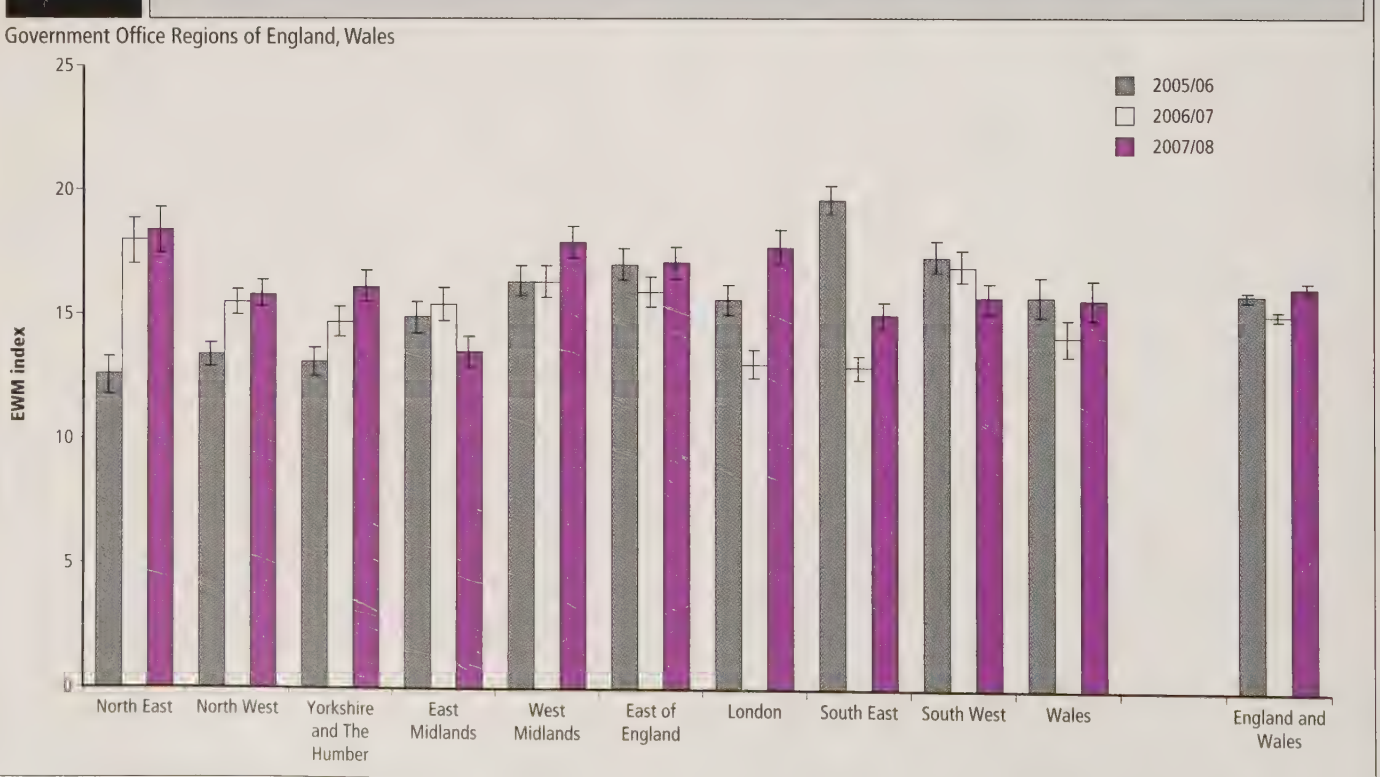
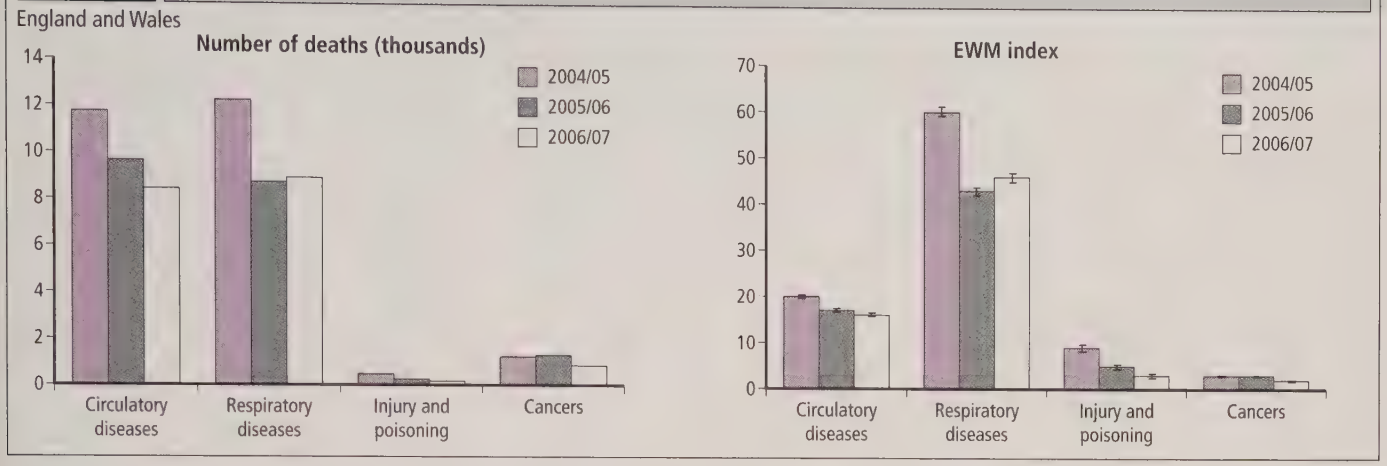


**Figure 7** Excess winter mortality by underlying cause of death, 2004/05 to 2006/07




There were slightly more excess winter deaths with an underlying cause of respiratory disease than circulatory disease for the winters of 2004/05 and 2006/07, and a higher number of excess winter circulatory disease deaths in 2005/06 (Figure 7), although the numbers for each cause of death for each winter were similar. However, the EWM index is much lower for circulatory diseases than for respiratory diseases for all of the winter periods. This means that a greater number of circulatory disease deaths than respiratory disease deaths occurred during the non-winter periods than during the winter periods in 2004/05 to 2006/07.

For all of the causes examined except respiratory diseases, both numbers of excess winter deaths and the EWM index decreased between 2005/06 and 2006/07. The number of excess winter deaths due to respiratory diseases increased by 2 per cent in 2006/07. Respiratory disease deaths had the highest EWM index for all of the winters analysed. In the winter of 2006/07, the EWM index was 46 per cent. This was an increase of 3 percentage points from the previous winter.

Table 2 shows the number of excess winter deaths and the EWM index by sex and age group for circulatory and respiratory diseases, injury and poisoning deaths, and cancers in England and Wales for the winters of 2004/05 to 2006/07. For circulatory diseases, elderly adults aged 85 and over had the highest EWM index in both males and females across the winter periods. The general pattern is for the EWM index for circulatory diseases to increase with age for both males and females. However, in 2006/07, men and women aged 65–74 had slightly higher EWM indexes than those aged 75–84.

For respiratory diseases, elderly adults aged 85 and over also had the highest EWM index for males and females for the three winter periods examined. The pattern at younger ages varied more than for circulatory diseases. For deaths from injury and poisoning in 2006/07, the EWM index was higher in men and women aged 75–84 than for those aged 85 and over. Deaths from cancers varied across age groups for both sexes.

## References

1. The Pension Service – winter fuel payments, accessed on 1 October 2008, available at: www.thepensionservice.gov.uk/winterfuel/home.asp
2. Department of Health (2008) Flu Watch, accessed on 1 October 2008, available at: www.dh.gov.uk/en/AboutUs/MinistersAndDepartmentLeaders/ChiefMedicalOfficer/Features/DH_4103271
3. Johnson H and Griffiths C (2003) 'Estimating excess winter mortality in England and Wales', *Health Statistics Quarterly* **20**, 19–24. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
4. The Met Office – 2008 monthly weather summary, accessed on 1 October 2008, available at: www.metoffice.gov.uk/climate/uk/2008/index.html
5. Wilkinson P, Pattenden S, Armstrong B *et al* (2004) 'Vulnerability to winter mortality in elderly people in Britain: population based study', *British Medical Journal* Sept 2004, **18**, 329, 647–52.

**Table 2** Excess winter mortality by sex, age group and underlying cause of death, 2004/05 to 2006/07

England and Wales

| | | 2004/05 | | 2005/06 | | 2006/07 | |
|---|---|---|---|---|---|---|---|
| | | EWM[1] | EWM Index | EWM[1] | EWM Index | EWM[1] | EWM Index |
| **Males** | | | | | | | |
| Circulatory diseases | 0–64 | 440 | 9.1 | 620 | 13.6 | 250 | 5.5 |
| (ICD–10 I00–I99) | 65–74 | 1,070 | 17.8 | 720 | 12.9 | 710 | 13.7 |
| | 75–84 | 2,030 | 18.6 | 1,750 | 17.4 | 1,220 | 12.7 |
| | 85+ | 1,580 | 23.8 | 1,500 | 22.3 | 1,490 | 21.8 |
| | All ages | 5,110 | 18.0 | 4,600 | 17.0 | 3,660 | 14.0 |
| Respiratory diseases | 0–64 | 440 | 46.5 | 340 | 36.5 | 280 | 30.1 |
| (ICD–10 J00–J99) | 65–74 | 690 | 42.0 | 570 | 34.9 | 540 | 35.3 |
| | 75–84 | 1,780 | 47.0 | 1,180 | 31.6 | 1,250 | 36.3 |
| | 85+ | 1,690 | 54.7 | 1,360 | 43.0 | 1,370 | 42.8 |
| | All ages | 4,600 | 48.6 | 3,460 | 36.4 | 3,440 | 37.8 |
| Injury and poisoning | 0–64 | –10 | –0.6 | –110 | –5.0 | –160 | –7.0 |
| (ICD–10 V01–Y89) | 65–74 | 30 | 9.2 | 10 | 3.4 | – | –0.6 |
| | 75–84 | 30 | 6.0 | 40 | 10.5 | 80 | 20.0 |
| | 85+ | 50 | 14.9 | 80 | 23.8 | 50 | 13.1 |
| | All ages | 90 | 2.7 | 20 | 0.5 | –30 | –1.0 |
| Cancers | 0–64 | – | – | 160 | 2.9 | –130 | –2.4 |
| (ICD–10 C00–D48) | 65–74 | 230 | 3.4 | 70 | 1.0 | 70 | 1.0 |
| | 75–84 | 100 | 1.1 | 190 | 2.3 | 250 | 3.1 |
| | 85+ | 190 | 5.8 | 140 | 3.9 | 160 | 4.4 |
| | All ages | 510 | 2.1 | 550 | 2.3 | 350 | 1.4 |
| **Females** | | | | | | | |
| Circulatory diseases | 0–64 | 240 | 12.7 | 160 | 8.8 | 170 | 9.9 |
| (ICD–10 I00–I99) | 65–74 | 480 | 13.9 | 460 | 14.3 | 470 | 16.1 |
| | 75–84 | 2,410 | 22.2 | 1,540 | 15.5 | 1,420 | 15.6 |
| | 85+ | 3,510 | 24.4 | 2,890 | 20.2 | 2,700 | 19.4 |
| | All ages | 6,630 | 21.7 | 5,040 | 17.3 | 4,760 | 17.2 |
| Respiratory diseases | 0–64 | 430 | 71.5 | 320 | 49.3 | 260 | 40.4 |
| (ICD–10 J00–J99) | 65–74 | 780 | 63.4 | 470 | 39.1 | 620 | 54.9 |
| | 75–84 | 2,330 | 64.1 | 1,480 | 40.9 | 1,580 | 47.4 |
| | 85+ | 4,100 | 76.2 | 2,990 | 54.4 | 3,020 | 57.9 |
| | All ages | 7,640 | 70.4 | 5,260 | 48.0 | 5,480 | 53.1 |
| Injury and poisoning | 0–64 | 10 | 1.0 | 40 | 5.1 | – | – |
| (ICD–10 V01–Y89) | 65–74 | 30 | 19.8 | 20 | 10.7 | 10 | 5.4 |
| | 75–84 | 130 | 29.1 | 40 | 8.0 | 80 | 19.3 |
| | 85+ | 220 | 28.8 | 150 | 19.4 | 110 | 14.7 |
| | All ages | 390 | 18.4 | 230 | 11.4 | 210 | 10.1 |
| Cancers | 0–64 | 120 | 2.3 | 40 | 0.7 | –100 | –1.9 |
| (ICD–10 C00–D48) | 65–74 | 140 | 2.7 | 290 | 6.0 | 160 | 3.2 |
| | 75–84 | 250 | 3.5 | 190 | 2.6 | 280 | 4.0 |
| | 85+ | 200 | 4.7 | 220 | 4.9 | 160 | 3.4 |
| | All ages | 720 | 3.3 | 730 | 3.4 | 500 | 2.3 |

1 Rounded to the nearest 10.

**Appendix A**

## Number of deaths by month, age group and area of usual residence, males, 2006

Government Office Regions of England, Wales

| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| England, Wales and elsewhere | 0–64 | 4,841 | 4,286 | 4,644 | 4,393 | 4,440 | 4,434 | 4,488 | 4,357 | 4,207 | 4,456 | 4,458 | 4,449 | 53,453 |
| | 65–74 | 4,463 | 4,019 | 4,620 | 4,206 | 3,959 | 3,967 | 4,052 | 3,791 | 3,552 | 3,887 | 4,076 | 4,351 | 48,943 |
| | 75–84 | 7,646 | 7,087 | 7,846 | 7,001 | 6,772 | 6,308 | 6,574 | 6,241 | 5,938 | 6,653 | 6,755 | 7,163 | 81,984 |
| | 85+ | 5,327 | 4,923 | 5,548 | 4,646 | 4,509 | 4,316 | 4,341 | 4,144 | 4,054 | 4,493 | 4,825 | 5,176 | 56,302 |
| | All ages | 22,277 | 20,315 | 22,658 | 20,246 | 19,680 | 19,025 | 19,455 | 18,533 | 17,751 | 19,489 | 20,114 | 21,139 | 240,682 |
| North East | 0–64 | 275 | 209 | 231 | 271 | 263 | 223 | 228 | 250 | 218 | 251 | 253 | 275 | 2,947 |
| | 65–74 | 276 | 239 | 253 | 248 | 249 | 211 | 262 | 215 | 194 | 231 | 236 | 312 | 2,926 |
| | 75–84 | 390 | 380 | 436 | 388 | 365 | 325 | 376 | 304 | 337 | 369 | 370 | 384 | 4,424 |
| | 85+ | 227 | 231 | 243 | 187 | 205 | 186 | 167 | 179 | 186 | 213 | 241 | 236 | 2,501 |
| | All ages | 1,168 | 1,059 | 1,163 | 1,094 | 1,082 | 945 | 1,033 | 948 | 935 | 1,064 | 1,100 | 1,207 | 12,798 |
| North West | 0–64 | 696 | 654 | 733 | 665 | 699 | 676 | 716 | 658 | 651 | 633 | 665 | 654 | 8,100 |
| | 65–74 | 664 | 566 | 662 | 646 | 592 | 633 | 598 | 532 | 572 | 616 | 612 | 662 | 7,355 |
| | 75–84 | 1,098 | 963 | 1,049 | 973 | 944 | 835 | 917 | 842 | 804 | 881 | 892 | 944 | 11,142 |
| | 85+ | 630 | 545 | 673 | 547 | 581 | 541 | 535 | 505 | 502 | 536 | 580 | 628 | 6,803 |
| | All ages | 3,088 | 2,728 | 3,117 | 2,831 | 2,816 | 2,685 | 2,766 | 2,537 | 2,529 | 2,666 | 2,749 | 2,888 | 33,400 |
| Yorkshire and The Humber | 0–64 | 491 | 437 | 463 | 415 | 430 | 450 | 439 | 446 | 416 | 465 | 464 | 422 | 5,338 |
| | 65–74 | 485 | 394 | 456 | 446 | 397 | 412 | 425 | 374 | 358 | 380 | 413 | 438 | 4,978 |
| | 75–84 | 715 | 711 | 751 | 717 | 698 | 614 | 637 | 645 | 627 | 669 | 665 | 714 | 8,163 |
| | 85+ | 498 | 434 | 485 | 422 | 420 | 387 | 399 | 436 | 408 | 424 | 464 | 481 | 5,258 |
| | All ages | 2,189 | 1,976 | 2,155 | 2,000 | 1,945 | 1,863 | 1,900 | 1,901 | 1,809 | 1,938 | 2,006 | 2,055 | 23,737 |
| East Midlands | 0–64 | 394 | 351 | 373 | 343 | 346 | 396 | 357 | 339 | 348 | 408 | 361 | 341 | 4,357 |
| | 65–74 | 368 | 329 | 376 | 329 | 301 | 310 | 352 | 322 | 264 | 330 | 351 | 362 | 3,994 |
| | 75–84 | 671 | 596 | 695 | 627 | 602 | 562 | 653 | 553 | 507 | 612 | 599 | 615 | 7,292 |
| | 85+ | 440 | 400 | 480 | 413 | 371 | 324 | 390 | 350 | 355 | 373 | 420 | 438 | 4,754 |
| | All ages | 1,873 | 1,676 | 1,924 | 1,712 | 1,620 | 1,592 | 1,752 | 1,564 | 1,474 | 1,723 | 1,731 | 1,756 | 20,397 |
| West Midlands | 0–64 | 515 | 456 | 510 | 475 | 512 | 490 | 501 | 469 | 463 | 463 | 481 | 496 | 5,831 |
| | 65–74 | 464 | 437 | 507 | 465 | 458 | 423 | 403 | 417 | 420 | 422 | 424 | 488 | 5,328 |
| | 75–84 | 846 | 722 | 835 | 718 | 695 | 673 | 700 | 627 | 641 | 675 | 735 | 744 | 8,611 |
| | 85+ | 546 | 485 | 552 | 474 | 446 | 414 | 448 | 415 | 409 | 450 | 477 | 484 | 5,600 |
| | All ages | 2,371 | 2,100 | 2,404 | 2,132 | 2,111 | 2,000 | 2,052 | 1,928 | 1,933 | 2,010 | 2,117 | 2,212 | 25,370 |
| East of England | 0–64 | 441 | 400 | 441 | 389 | 369 | 369 | 379 | 381 | 372 | 408 | 439 | 411 | 4,799 |
| | 65–74 | 451 | 405 | 454 | 405 | 407 | 380 | 394 | 352 | 347 | 364 | 367 | 402 | 4,728 |
| | 75–84 | 776 | 774 | 817 | 715 | 717 | 682 | 701 | 663 | 640 | 719 | 756 | 781 | 8,741 |
| | 85+ | 629 | 570 | 657 | 586 | 527 | 503 | 511 | 440 | 463 | 529 | 539 | 587 | 6,541 |
| | All ages | 2,297 | 2,149 | 2,369 | 2,095 | 2,020 | 1,934 | 1,985 | 1,836 | 1,822 | 2,020 | 2,101 | 2,181 | 24,809 |
| London | 0–64 | 639 | 530 | 606 | 553 | 559 | 568 | 577 | 546 | 526 | 534 | 545 | 564 | 6,747 |
| | 65–74 | 437 | 436 | 487 | 427 | 415 | 400 | 434 | 450 | 365 | 380 | 436 | 431 | 5,098 |
| | 75–84 | 772 | 666 | 744 | 686 | 651 | 599 | 609 | 619 | 569 | 651 | 643 | 696 | 7,905 |
| | 85+ | 500 | 494 | 565 | 435 | 418 | 437 | 433 | 366 | 361 | 420 | 464 | 506 | 5,399 |
| | All ages | 2,348 | 2,126 | 2,402 | 2,101 | 2,043 | 2,004 | 2,053 | 1,981 | 1,821 | 1,985 | 2,088 | 2,197 | 25,149 |
| South East | 0–64 | 621 | 590 | 573 | 568 | 589 | 583 | 599 | 590 | 558 | 614 | 584 | 596 | 7,065 |
| | 65–74 | 617 | 571 | 675 | 571 | 499 | 559 | 510 | 493 | 470 | 531 | 553 | 555 | 6,604 |
| | 75–84 | 1,114 | 1,044 | 1,200 | 1,009 | 972 | 900 | 926 | 918 | 818 | 940 | 977 | 1,106 | 11,924 |
| | 85+ | 912 | 842 | 952 | 738 | 750 | 727 | 723 | 698 | 682 | 750 | 782 | 855 | 9,411 |
| | All ages | 3,264 | 3,047 | 3,400 | 2,886 | 2,810 | 2,769 | 2,758 | 2,699 | 2,528 | 2,835 | 2,896 | 3,112 | 35,004 |
| South West | 0–64 | 421 | 361 | 394 | 395 | 370 | 363 | 371 | 390 | 353 | 403 | 357 | 379 | 4,557 |
| | 65–74 | 426 | 363 | 457 | 405 | 356 | 382 | 385 | 356 | 335 | 389 | 400 | 399 | 4,653 |
| | 75–84 | 780 | 751 | 788 | 722 | 716 | 718 | 642 | 643 | 633 | 731 | 711 | 716 | 8,551 |
| | 85+ | 629 | 601 | 632 | 535 | 556 | 541 | 495 | 494 | 457 | 533 | 577 | 646 | 6,696 |
| | All ages | 2,256 | 2,076 | 2,271 | 2,057 | 1,998 | 2,004 | 1,893 | 1,883 | 1,778 | 2,056 | 2,045 | 2,140 | 24,457 |
| Wales | 0–64 | 310 | 273 | 288 | 287 | 269 | 283 | 280 | 253 | 271 | 238 | 274 | 278 | 3,304 |
| | 65–74 | 264 | 270 | 283 | 252 | 269 | 242 | 278 | 266 | 211 | 231 | 272 | 296 | 3,134 |
| | 75–84 | 470 | 474 | 527 | 433 | 402 | 387 | 400 | 417 | 357 | 395 | 402 | 452 | 5,116 |
| | 85+ | 313 | 316 | 308 | 308 | 234 | 250 | 234 | 256 | 229 | 263 | 281 | 309 | 3,301 |
| | All ages | 1,357 | 1,333 | 1,406 | 1,280 | 1,174 | 1,162 | 1,192 | 1,192 | 1,068 | 1,127 | 1,229 | 1,335 | 14,855 |
| England | 0–64 | 4,493 | 3,988 | 4,324 | 4,074 | 4,137 | 4,118 | 4,167 | 4,069 | 3,905 | 4,179 | 4,149 | 4,138 | 49,741 |
| | 65–74 | 4,188 | 3,740 | 4,327 | 3,942 | 3,674 | 3,710 | 3,763 | 3,511 | 3,325 | 3,643 | 3,792 | 4,049 | 45,664 |
| | 75–84 | 7,162 | 6,607 | 7,315 | 6,555 | 6,360 | 5,908 | 6,161 | 5,814 | 5,576 | 6,247 | 6,348 | 6,700 | 76,753 |
| | 85+ | 5,011 | 4,602 | 5,239 | 4,337 | 4,274 | 4,060 | 4,101 | 3,883 | 3,823 | 4,228 | 4,544 | 4,861 | 52,963 |
| | All ages | 20,854 | 18,937 | 21,205 | 18,908 | 18,445 | 17,796 | 18,192 | 17,277 | 16,629 | 18,297 | 18,833 | 19,748 | 225,121 |
| England and Wales | 0–64 | 4,803 | 4,261 | 4,612 | 4,361 | 4,406 | 4,401 | 4,447 | 4,322 | 4,176 | 4,417 | 4,423 | 4,416 | 53,045 |
| | 65–74 | 4,452 | 4,010 | 4,610 | 4,194 | 3,943 | 3,952 | 4,041 | 3,777 | 3,536 | 3,874 | 4,064 | 4,345 | 48,798 |
| | 75–84 | 7,632 | 7,081 | 7,842 | 6,988 | 6,762 | 6,295 | 6,561 | 6,231 | 5,933 | 6,642 | 6,750 | 7,152 | 81,869 |
| | 85+ | 5,324 | 4,918 | 5,547 | 4,645 | 4,508 | 4,310 | 4,335 | 4,139 | 4,052 | 4,491 | 4,825 | 5,170 | 56,264 |
| | All ages | 22,211 | 20,270 | 22,611 | 20,188 | 19,619 | 18,958 | 19,384 | 18,469 | 17,697 | 19,424 | 20,062 | 21,083 | 239,976 |
| elsewhere | 0–64 | 38 | 25 | 32 | 32 | 34 | 33 | 41 | 35 | 31 | 39 | 35 | 33 | 408 |
| | 65–74 | 11 | 9 | 10 | 12 | 16 | 15 | 11 | 14 | 16 | 13 | 12 | 6 | 145 |
| | 75–84 | 14 | 6 | 4 | 13 | 10 | 13 | 13 | 10 | 5 | 11 | 5 | 11 | 115 |
| | 85+ | 3 | 5 | 1 | 1 | 1 | 6 | 6 | 5 | 2 | 2 | – | 6 | 38 |
| | All ages | 66 | 45 | 47 | 58 | 61 | 67 | 71 | 64 | 54 | 65 | 52 | 56 | 706 |

**Appendix B** **Number of deaths by month, age group and area of usual residence, females, 2006**

Government Office Regions of England, Wales

| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| England, Wales and elsewhere | 0–64 | 3,062 | 2,784 | 3,067 | 2,845 | 2,795 | 2,693 | 2,791 | 2,699 | 2,719 | 2,780 | 2,798 | 2,898 | 33,931 |
| | 65–74 | 3,174 | 2,931 | 3,185 | 2,844 | 2,894 | 2,777 | 2,763 | 2,731 | 2,588 | 2,823 | 2,782 | 3,029 | 34,521 |
| | 75–84 | 7,794 | 7,027 | 7,792 | 7,087 | 6,579 | 6,321 | 6,566 | 6,117 | 5,900 | 6,387 | 6,683 | 7,055 | 81,308 |
| | 85+ | 11,226 | 10,023 | 11,103 | 9,823 | 8,771 | 8,560 | 8,677 | 7,956 | 7,972 | 8,862 | 9,095 | 10,123 | 112,191 |
| | All ages | 25,256 | 22,765 | 25,147 | 22,599 | 21,039 | 20,351 | 20,797 | 19,503 | 19,179 | 20,852 | 21,358 | 23,105 | 261,951 |
| North East | 0–64 | 178 | 138 | 188 | 154 | 157 | 151 | 130 | 174 | 152 | 161 | 172 | 152 | 1,907 |
| | 65–74 | 204 | 190 | 213 | 173 | 195 | 191 | 164 | 161 | 155 | 176 | 153 | 186 | 2,161 |
| | 75–84 | 452 | 409 | 418 | 450 | 410 | 364 | 360 | 333 | 334 | 360 | 395 | 473 | 4,758 |
| | 85+ | 536 | 437 | 498 | 479 | 383 | 401 | 398 | 382 | 389 | 432 | 412 | 476 | 5,223 |
| | All ages | 1,370 | 1,174 | 1,317 | 1,256 | 1,145 | 1,107 | 1,052 | 1,050 | 1,030 | 1,129 | 1,132 | 1,287 | 14,049 |
| North West | 0–64 | 454 | 410 | 454 | 428 | 398 | 453 | 413 | 431 | 396 | 433 | 458 | 454 | 5,182 |
| | 65–74 | 497 | 424 | 450 | 440 | 443 | 420 | 410 | 404 | 416 | 417 | 436 | 457 | 5,214 |
| | 75–84 | 1,064 | 955 | 1,146 | 1,102 | 943 | 872 | 916 | 894 | 841 | 925 | 942 | 1,010 | 11,610 |
| | 85+ | 1,458 | 1,258 | 1,360 | 1,351 | 1,167 | 1,101 | 1,102 | 1,022 | 1,017 | 1,164 | 1,189 | 1,294 | 14,483 |
| | All ages | 3,473 | 3,047 | 3,410 | 3,321 | 2,951 | 2,846 | 2,841 | 2,751 | 2,670 | 2,939 | 3,025 | 3,215 | 36,489 |
| Yorkshire and The Humber | 0–64 | 315 | 288 | 292 | 285 | 270 | 239 | 255 | 248 | 279 | 300 | 277 | 314 | 3,362 |
| | 65–74 | 321 | 305 | 319 | 306 | 315 | 312 | 296 | 289 | 262 | 315 | 296 | 328 | 3,664 |
| | 75–84 | 774 | 696 | 752 | 679 | 667 | 669 | 654 | 580 | 600 | 683 | 688 | 726 | 8,168 |
| | 85+ | 1,012 | 861 | 1,010 | 907 | 826 | 813 | 832 | 767 | 768 | 830 | 878 | 977 | 10,481 |
| | All ages | 2,422 | 2,150 | 2,373 | 2,177 | 2,078 | 2,033 | 2,037 | 1,884 | 1,909 | 2,128 | 2,139 | 2,345 | 25,675 |
| East Midlands | 0–64 | 250 | 244 | 235 | 270 | 226 | 216 | 240 | 213 | 199 | 223 | 247 | 224 | 2,787 |
| | 65–74 | 239 | 254 | 257 | 243 | 238 | 245 | 236 | 233 | 195 | 206 | 239 | 259 | 2,844 |
| | 75–84 | 661 | 597 | 671 | 586 | 528 | 513 | 519 | 513 | 509 | 544 | 586 | 616 | 6,843 |
| | 85+ | 859 | 831 | 867 | 829 | 681 | 729 | 714 | 659 | 595 | 727 | 711 | 798 | 9,000 |
| | All ages | 2,009 | 1,926 | 2,030 | 1,928 | 1,673 | 1,703 | 1,709 | 1,618 | 1,498 | 1,700 | 1,783 | 1,897 | 21,474 |
| West Midlands | 0–64 | 303 | 268 | 314 | 310 | 278 | 312 | 299 | 284 | 301 | 314 | 279 | 299 | 3,561 |
| | 65–74 | 360 | 317 | 339 | 298 | 301 | 270 | 256 | 283 | 280 | 348 | 289 | 342 | 3,683 |
| | 75–84 | 845 | 763 | 796 | 717 | 688 | 624 | 736 | 641 | 599 | 623 | 626 | 768 | 8,426 |
| | 85+ | 1,101 | 1,004 | 1,118 | 961 | 899 | 842 | 855 | 766 | 828 | 836 | 916 | 960 | 11,086 |
| | All ages | 2,609 | 2,352 | 2,567 | 2,286 | 2,166 | 2,048 | 2,146 | 1,974 | 2,008 | 2,121 | 2,110 | 2,369 | 26,756 |
| East of England | 0–64 | 270 | 255 | 284 | 242 | 277 | 217 | 246 | 247 | 248 | 250 | 256 | 280 | 3,072 |
| | 65–74 | 331 | 288 | 330 | 279 | 265 | 289 | 276 | 265 | 233 | 245 | 294 | 295 | 3,390 |
| | 75–84 | 811 | 744 | 774 | 735 | 667 | 683 | 660 | 641 | 620 | 677 | 705 | 753 | 8,470 |
| | 85+ | 1,215 | 1,111 | 1,216 | 1,046 | 972 | 897 | 950 | 867 | 839 | 939 | 946 | 1,153 | 12,151 |
| | All ages | 2,627 | 2,398 | 2,604 | 2,302 | 2,181 | 2,086 | 2,132 | 2,020 | 1,940 | 2,111 | 2,201 | 2,481 | 27,083 |
| London | 0–64 | 341 | 333 | 379 | 329 | 330 | 326 | 366 | 335 | 325 | 318 | 286 | 314 | 3,982 |
| | 65–74 | 273 | 310 | 312 | 310 | 298 | 256 | 306 | 257 | 258 | 290 | 277 | 291 | 3,438 |
| | 75–84 | 724 | 675 | 735 | 622 | 610 | 642 | 656 | 599 | 568 | 586 | 621 | 626 | 7,664 |
| | 85+ | 1,073 | 1,020 | 1,092 | 879 | 854 | 826 | 855 | 767 | 761 | 815 | 844 | 1,010 | 10,796 |
| | All ages | 2,411 | 2,338 | 2,518 | 2,140 | 2,092 | 2,050 | 2,183 | 1,958 | 1,912 | 2,009 | 2,028 | 2,241 | 25,880 |
| South East | 0–64 | 472 | 399 | 417 | 385 | 425 | 360 | 390 | 365 | 378 | 364 | 395 | 386 | 4,736 |
| | 65–74 | 460 | 394 | 468 | 386 | 380 | 358 | 376 | 383 | 372 | 389 | 370 | 394 | 4,730 |
| | 75–84 | 1,169 | 1,067 | 1,197 | 1,030 | 971 | 925 | 943 | 867 | 834 | 980 | 958 | 1,021 | 11,962 |
| | 85+ | 1,992 | 1,758 | 1,909 | 1,679 | 1,473 | 1,421 | 1,525 | 1,264 | 1,359 | 1,512 | 1,573 | 1,635 | 19,100 |
| | All ages | 4,093 | 3,618 | 3,991 | 3,480 | 3,249 | 3,064 | 3,234 | 2,879 | 2,943 | 3,245 | 3,296 | 3,436 | 40,528 |
| South West | 0–64 | 273 | 243 | 280 | 255 | 257 | 219 | 231 | 230 | 244 | 237 | 243 | 269 | 2,981 |
| | 65–74 | 278 | 246 | 278 | 244 | 243 | 236 | 252 | 266 | 240 | 248 | 262 | 287 | 3,080 |
| | 75–84 | 802 | 684 | 828 | 698 | 666 | 626 | 671 | 660 | 577 | 596 | 732 | 662 | 8,202 |
| | 85+ | 1,322 | 1,153 | 1,384 | 1,068 | 1,002 | 1,003 | 933 | 957 | 916 | 1,058 | 1,055 | 1,200 | 13,051 |
| | All ages | 2,675 | 2,326 | 2,770 | 2,265 | 2,168 | 2,084 | 2,087 | 2,113 | 1,977 | 2,139 | 2,292 | 2,418 | 27,314 |
| Wales | 0–64 | 186 | 186 | 208 | 173 | 160 | 183 | 198 | 156 | 177 | 166 | 169 | 197 | 2,159 |
| | 65–74 | 204 | 196 | 211 | 155 | 206 | 186 | 181 | 175 | 167 | 179 | 160 | 185 | 2,205 |
| | 75–84 | 478 | 435 | 467 | 455 | 423 | 398 | 441 | 381 | 410 | 409 | 419 | 392 | 5,108 |
| | 85+ | 653 | 583 | 639 | 624 | 509 | 518 | 510 | 500 | 497 | 545 | 568 | 613 | 6,759 |
| | All ages | 1,521 | 1,400 | 1,525 | 1,407 | 1,298 | 1,285 | 1,330 | 1,212 | 1,251 | 1,299 | 1,316 | 1,387 | 16,231 |
| England | 0–64 | 2,856 | 2,578 | 2,843 | 2,658 | 2,618 | 2,493 | 2,570 | 2,527 | 2,522 | 2,600 | 2,613 | 2,692 | 31,570 |
| | 65–74 | 2,963 | 2,728 | 2,966 | 2,679 | 2,678 | 2,577 | 2,572 | 2,541 | 2,411 | 2,634 | 2,616 | 2,839 | 32,204 |
| | 75–84 | 7,302 | 6,590 | 7,317 | 6,619 | 6,150 | 5,918 | 6,115 | 5,728 | 5,482 | 5,974 | 6,253 | 6,655 | 76,103 |
| | 85+ | 10,568 | 9,433 | 10,454 | 9,199 | 8,257 | 8,033 | 8,164 | 7,451 | 7,472 | 8,313 | 8,524 | 9,503 | 105,371 |
| | All ages | 23,689 | 21,329 | 23,580 | 21,155 | 19,703 | 19,021 | 19,421 | 18,247 | 17,887 | 19,521 | 20,006 | 21,689 | 245,248 |
| England and Wales | 0–64 | 3,042 | 2,764 | 3,051 | 2,831 | 2,778 | 2,676 | 2,768 | 2,683 | 2,699 | 2,766 | 2,782 | 2,889 | 33,729 |
| | 65–74 | 3,167 | 2,924 | 3,177 | 2,834 | 2,884 | 2,763 | 2,753 | 2,716 | 2,578 | 2,813 | 2,776 | 3,024 | 34,409 |
| | 75–84 | 7,780 | 7,025 | 7,784 | 7,074 | 6,573 | 6,316 | 6,556 | 6,109 | 5,892 | 6,383 | 6,672 | 7,047 | 81,211 |
| | 85+ | 11,221 | 10,016 | 11,093 | 9,823 | 8,766 | 8,551 | 8,674 | 7,951 | 7,969 | 8,858 | 9,092 | 10,116 | 112,130 |
| | All ages | 25,210 | 22,729 | 25,105 | 22,562 | 21,001 | 20,306 | 20,751 | 19,459 | 19,138 | 20,820 | 21,322 | 23,076 | 261,479 |
| elsewhere | 0–64 | 20 | 20 | 16 | 14 | 17 | 17 | 23 | 16 | 20 | 14 | 16 | 9 | 202 |
| | 65–74 | 7 | 7 | 8 | 10 | 10 | 14 | 10 | 15 | 10 | 10 | 6 | 5 | 112 |
| | 75–84 | 14 | 2 | 8 | 13 | 6 | 5 | 10 | 8 | 8 | 4 | 11 | 8 | 97 |
| | 85+ | 5 | 7 | 10 | – | 5 | 9 | 3 | 5 | 3 | 4 | 3 | 7 | 61 |
| | All ages | 46 | 36 | 42 | 37 | 38 | 45 | 46 | 44 | 41 | 32 | 36 | 29 | 472 |

## Appendix C

## Number of deaths by month, age group and area of usual residence, males, 2007

Government Office Regions of England, Wales

| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| England, Wales and elsewhere | 0–64 | 4,735 | 4,392 | 4,511 | 4,478 | 4,515 | 4,229 | 4,299 | 4,109 | 4,080 | 4,324 | 4,179 | 4,616 | 52,467 |
| | 65–74 | 4,443 | 3,974 | 4,206 | 3,957 | 3,974 | 3,762 | 3,786 | 3,735 | 3,615 | 3,855 | 4,057 | 4,386 | 47,750 |
| | 75–84 | 7,444 | 7,241 | 7,175 | 6,620 | 6,537 | 6,118 | 6,241 | 6,402 | 5,963 | 6,533 | 6,654 | 7,499 | 80,427 |
| | 85+ | 5,586 | 5,508 | 5,367 | 4,765 | 4,641 | 4,373 | 4,465 | 4,387 | 4,240 | 4,724 | 5,022 | 5,884 | 58,962 |
| | All ages | 22,208 | 21,115 | 21,259 | 19,820 | 19,667 | 18,482 | 18,791 | 18,633 | 17,898 | 19,436 | 19,912 | 22,385 | 239,606 |
| North East | 0–64 | 256 | 237 | 261 | 246 | 253 | 216 | 258 | 214 | 212 | 247 | 223 | 253 | 2,876 |
| | 65–74 | 280 | 231 | 271 | 220 | 217 | 225 | 215 | 204 | 203 | 192 | 231 | 255 | 2,744 |
| | 75–84 | 430 | 413 | 382 | 352 | 349 | 344 | 342 | 355 | 379 | 372 | 364 | 398 | 4,480 |
| | 85+ | 252 | 234 | 261 | 223 | 205 | 188 | 195 | 203 | 207 | 202 | 226 | 265 | 2,661 |
| | All ages | 1,218 | 1,115 | 1,175 | 1,041 | 1,024 | 973 | 1,010 | 976 | 1,001 | 1,013 | 1,044 | 1,171 | 12,761 |
| North West | 0–64 | 711 | 682 | 657 | 689 | 711 | 617 | 623 | 621 | 625 | 620 | 634 | 713 | 7,903 |
| | 65–74 | 703 | 572 | 652 | 594 | 606 | 612 | 619 | 566 | 561 | 600 | 540 | 645 | 7,270 |
| | 75–84 | 1,062 | 989 | 963 | 902 | 884 | 838 | 876 | 873 | 830 | 887 | 949 | 958 | 11,011 |
| | 85+ | 717 | 720 | 658 | 563 | 551 | 540 | 523 | 504 | 512 | 569 | 624 | 742 | 7,223 |
| | All ages | 3,193 | 2,963 | 2,930 | 2,748 | 2,752 | 2,607 | 2,641 | 2,564 | 2,528 | 2,676 | 2,747 | 3,058 | 33,407 |
| Yorkshire and The Humber | 0–64 | 511 | 442 | 452 | 463 | 449 | 426 | 416 | 433 | 422 | 429 | 438 | 508 | 5,389 |
| | 65–74 | 458 | 414 | 434 | 435 | 379 | 337 | 383 | 377 | 331 | 403 | 427 | 426 | 4,804 |
| | 75–84 | 714 | 712 | 700 | 655 | 662 | 633 | 607 | 665 | 563 | 644 | 625 | 770 | 7,950 |
| | 85+ | 515 | 508 | 492 | 461 | 415 | 412 | 391 | 403 | 379 | 427 | 452 | 516 | 5,371 |
| | All ages | 2,198 | 2,076 | 2,078 | 2,014 | 1,905 | 1,808 | 1,797 | 1,878 | 1,695 | 1,903 | 1,942 | 2,220 | 23,514 |
| East Midlands | 0–64 | 372 | 376 | 360 | 370 | 364 | 326 | 315 | 327 | 345 | 361 | 363 | 359 | 4,238 |
| | 65–74 | 347 | 348 | 354 | 341 | 339 | 331 | 318 | 323 | 295 | 317 | 326 | 360 | 3,999 |
| | 75–84 | 601 | 635 | 641 | 559 | 596 | 507 | 500 | 536 | 500 | 515 | 599 | 639 | 6,828 |
| | 85+ | 469 | 438 | 468 | 389 | 394 | 370 | 371 | 374 | 354 | 394 | 435 | 511 | 4,967 |
| | All ages | 1,789 | 1,797 | 1,823 | 1,659 | 1,693 | 1,534 | 1,504 | 1,560 | 1,494 | 1,587 | 1,723 | 1,869 | 20,032 |
| West Midlands | 0–64 | 519 | 474 | 504 | 490 | 471 | 481 | 424 | 432 | 437 | 481 | 450 | 509 | 5,672 |
| | 65–74 | 498 | 437 | 461 | 418 | 438 | 398 | 407 | 389 | 414 | 395 | 426 | 508 | 5,189 |
| | 75–84 | 799 | 807 | 803 | 673 | 699 | 673 | 673 | 648 | 599 | 670 | 703 | 805 | 8,552 |
| | 85+ | 535 | 523 | 515 | 434 | 478 | 451 | 420 | 443 | 428 | 480 | 456 | 578 | 5,741 |
| | All ages | 2,351 | 2,241 | 2,283 | 2,015 | 2,086 | 2,003 | 1,924 | 1,912 | 1,878 | 2,026 | 2,035 | 2,400 | 25,154 |
| East of England | 0–64 | 451 | 388 | 425 | 407 | 417 | 391 | 442 | 392 | 390 | 387 | 387 | 430 | 4,907 |
| | 65–74 | 448 | 374 | 388 | 374 | 398 | 355 | 341 | 344 | 355 | 372 | 419 | 423 | 4,591 |
| | 75–84 | 814 | 777 | 750 | 716 | 659 | 624 | 653 | 677 | 632 | 723 | 658 | 809 | 8,492 |
| | 85+ | 629 | 601 | 569 | 571 | 519 | 457 | 503 | 485 | 480 | 493 | 552 | 604 | 6,463 |
| | All ages | 2,342 | 2,140 | 2,132 | 2,068 | 1,993 | 1,827 | 1,939 | 1,898 | 1,857 | 1,975 | 2,016 | 2,266 | 24,453 |
| London | 0–64 | 568 | 548 | 553 | 506 | 542 | 561 | 532 | 501 | 483 | 462 | 489 | 556 | 6,301 |
| | 65–74 | 451 | 393 | 422 | 422 | 405 | 383 | 393 | 386 | 414 | 360 | 448 | 455 | 4,932 |
| | 75–84 | 710 | 702 | 641 | 643 | 604 | 584 | 640 | 597 | 590 | 601 | 666 | 695 | 7,673 |
| | 85+ | 541 | 477 | 529 | 472 | 462 | 426 | 440 | 399 | 382 | 451 | 504 | 580 | 5,663 |
| | All ages | 2,270 | 2,120 | 2,145 | 2,043 | 2,013 | 1,954 | 2,005 | 1,883 | 1,869 | 1,874 | 2,107 | 2,286 | 24,569 |
| South East | 0–64 | 632 | 544 | 588 | 580 | 641 | 530 | 592 | 546 | 519 | 647 | 531 | 566 | 6,916 |
| | 65–74 | 580 | 509 | 550 | 515 | 532 | 509 | 512 | 506 | 506 | 542 | 575 | 645 | 6,481 |
| | 75–84 | 1,063 | 998 | 1,056 | 964 | 943 | 853 | 899 | 941 | 885 | 948 | 1,012 | 1,098 | 11,660 |
| | 85+ | 936 | 942 | 887 | 754 | 761 | 719 | 756 | 723 | 708 | 822 | 881 | 1,033 | 9,922 |
| | All ages | 3,211 | 2,993 | 3,081 | 2,813 | 2,877 | 2,611 | 2,759 | 2,716 | 2,618 | 2,959 | 2,999 | 3,342 | 34,979 |
| South West | 0–64 | 411 | 386 | 408 | 399 | 374 | 383 | 393 | 351 | 356 | 373 | 350 | 389 | 4,573 |
| | 65–74 | 401 | 417 | 391 | 379 | 363 | 347 | 346 | 345 | 300 | 360 | 356 | 385 | 4,390 |
| | 75–84 | 775 | 723 | 785 | 712 | 667 | 655 | 662 | 655 | 613 | 750 | 650 | 781 | 8,428 |
| | 85+ | 661 | 734 | 671 | 574 | 564 | 551 | 570 | 568 | 527 | 583 | 618 | 722 | 7,343 |
| | All ages | 2,248 | 2,260 | 2,255 | 2,064 | 1,968 | 1,936 | 1,971 | 1,919 | 1,796 | 2,066 | 1,974 | 2,277 | 24,734 |
| Wales | 0–64 | 278 | 281 | 261 | 297 | 269 | 261 | 271 | 256 | 260 | 274 | 287 | 304 | 3,299 |
| | 65–74 | 262 | 268 | 273 | 247 | 281 | 247 | 232 | 274 | 227 | 299 | 297 | 275 | 3,182 |
| | 75–84 | 468 | 480 | 446 | 432 | 467 | 399 | 375 | 441 | 366 | 406 | 424 | 533 | 5,237 |
| | 85+ | 325 | 327 | 314 | 319 | 290 | 254 | 291 | 281 | 259 | 298 | 272 | 330 | 3,560 |
| | All ages | 1,333 | 1,356 | 1,294 | 1,295 | 1,307 | 1,161 | 1,169 | 1,252 | 1,112 | 1,277 | 1,280 | 1,442 | 15,278 |
| England | 0–64 | 4,431 | 4,077 | 4,208 | 4,150 | 4,222 | 3,931 | 3,995 | 3,817 | 3,789 | 4,007 | 3,865 | 4,283 | 48,775 |
| | 65–74 | 4,166 | 3,695 | 3,923 | 3,698 | 3,677 | 3,497 | 3,534 | 3,440 | 3,379 | 3,541 | 3,748 | 4,102 | 44,400 |
| | 75–84 | 6,968 | 6,756 | 6,721 | 6,176 | 6,063 | 5,711 | 5,852 | 5,947 | 5,591 | 6,110 | 6,226 | 6,953 | 75,074 |
| | 85+ | 5,255 | 5,177 | 5,050 | 4,441 | 4,349 | 4,114 | 4,169 | 4,102 | 3,977 | 4,421 | 4,748 | 5,551 | 55,354 |
| | All ages | 20,820 | 19,705 | 19,902 | 18,465 | 18,311 | 17,253 | 17,550 | 17,306 | 16,736 | 18,079 | 18,587 | 20,889 | 223,603 |
| England and Wales | 0–64 | 4,709 | 4,358 | 4,469 | 4,447 | 4,491 | 4,192 | 4,266 | 4,073 | 4,049 | 4,281 | 4,152 | 4,587 | 52,074 |
| | 65–74 | 4,428 | 3,963 | 4,196 | 3,945 | 3,958 | 3,744 | 3,766 | 3,714 | 3,606 | 3,840 | 4,045 | 4,377 | 47,582 |
| | 75–84 | 7,436 | 7,236 | 7,167 | 6,608 | 6,530 | 6,110 | 6,227 | 6,388 | 5,957 | 6,516 | 6,650 | 7,486 | 80,311 |
| | 85+ | 5,580 | 5,504 | 5,364 | 4,760 | 4,639 | 4,368 | 4,460 | 4,383 | 4,236 | 4,719 | 5,020 | 5,881 | 58,914 |
| | All ages | 22,153 | 21,061 | 21,196 | 19,760 | 19,618 | 18,414 | 18,719 | 18,558 | 17,848 | 19,356 | 19,867 | 22,331 | 238,881 |
| elsewhere | 0–64 | 26 | 34 | 42 | 31 | 24 | 37 | 33 | 36 | 31 | 43 | 27 | 29 | 393 |
| | 65–74 | 15 | 11 | 10 | 12 | 16 | 18 | 20 | 21 | 9 | 15 | 12 | 9 | 168 |
| | 75–84 | 8 | 5 | 8 | 12 | 7 | 8 | 14 | 14 | 6 | 17 | 4 | 13 | 116 |
| | 85+ | 6 | 4 | 3 | 5 | 2 | 5 | 5 | 4 | 4 | 5 | 2 | 3 | 48 |
| | All ages | 55 | 54 | 63 | 60 | 49 | 68 | 72 | 75 | 50 | 80 | 45 | 54 | 725 |

## Appendix D

### Number of deaths by month, age group and area of usual residence, females, 2007

Government Office Regions of England, Wales

| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| England, Wales and elsewhere | 0–64 | 3,066 | 2,795 | 2,901 | 2,853 | 2,873 | 2,696 | 2,692 | 2,683 | 2,627 | 2,770 | 2,835 | 3,038 | 33,829 |
| | 65–74 | 3,251 | 3,005 | 3,054 | 2,804 | 2,751 | 2,599 | 2,523 | 2,543 | 2,579 | 2,770 | 2,823 | 3,099 | 33,801 |
| | 75–84 | 7,833 | 7,196 | 7,163 | 6,609 | 6,201 | 5,973 | 6,116 | 5,965 | 5,858 | 6,373 | 6,609 | 7,490 | 79,386 |
| | 85+ | 11,213 | 10,918 | 10,472 | 9,440 | 9,059 | 8,576 | 8,607 | 8,563 | 8,341 | 9,331 | 9,733 | 11,594 | 115,847 |
| | All ages | 25,363 | 23,914 | 23,590 | 21,706 | 20,884 | 19,844 | 19,938 | 19,754 | 19,405 | 21,244 | 22,000 | 25,221 | 262,863 |
| North East | 0–64 | 173 | 167 | 166 | 163 | 158 | 135 | 140 | 138 | 125 | 163 | 145 | 165 | 1,838 |
| | 65–74 | 221 | 185 | 213 | 161 | 174 | 172 | 154 | 152 | 158 | 152 | 160 | 197 | 2,099 |
| | 75–84 | 434 | 394 | 433 | 369 | 363 | 340 | 341 | 359 | 352 | 379 | 388 | 434 | 4,586 |
| | 85+ | 541 | 468 | 493 | 444 | 399 | 379 | 440 | 397 | 370 | 444 | 472 | 533 | 5,380 |
| | All ages | 1,369 | 1,214 | 1,305 | 1,137 | 1,094 | 1,026 | 1,075 | 1,046 | 1,005 | 1,138 | 1,165 | 1,329 | 13,903 |
| North West | 0–64 | 471 | 383 | 440 | 412 | 414 | 371 | 441 | 400 | 416 | 413 | 423 | 453 | 5,037 |
| | 65–74 | 507 | 508 | 504 | 445 | 430 | 447 | 383 | 363 | 363 | 451 | 473 | 439 | 5,313 |
| | 75–84 | 1,111 | 1,030 | 1,046 | 970 | 899 | 855 | 916 | 853 | 856 | 923 | 935 | 1,028 | 11,422 |
| | 85+ | 1,475 | 1,468 | 1,408 | 1,263 | 1,155 | 1,130 | 1,084 | 1,073 | 1,138 | 1,239 | 1,277 | 1,511 | 15,221 |
| | All ages | 3,564 | 3,389 | 3,398 | 3,090 | 2,898 | 2,803 | 2,824 | 2,689 | 2,773 | 3,026 | 3,108 | 3,431 | 36,993 |
| Yorkshire and The Humber | 0–64 | 299 | 321 | 281 | 314 | 287 | 269 | 260 | 279 | 269 | 271 | 313 | 350 | 3,513 |
| | 65–74 | 361 | 297 | 297 | 290 | 296 | 274 | 287 | 268 | 301 | 288 | 288 | 329 | 3,576 |
| | 75–84 | 827 | 785 | 737 | 708 | 668 | 624 | 584 | 614 | 620 | 662 | 674 | 820 | 8,323 |
| | 85+ | 1,097 | 1,063 | 1,012 | 941 | 868 | 817 | 874 | 856 | 836 | 914 | 935 | 1,183 | 11,396 |
| | All ages | 2,584 | 2,466 | 2,327 | 2,253 | 2,119 | 1,984 | 2,005 | 2,017 | 2,026 | 2,135 | 2,210 | 2,682 | 26,808 |
| East Midlands | 0–64 | 280 | 242 | 249 | 231 | 243 | 215 | 252 | 214 | 213 | 236 | 243 | 258 | 2,876 |
| | 65–74 | 272 | 242 | 243 | 238 | 234 | 181 | 196 | 232 | 209 | 220 | 228 | 231 | 2,726 |
| | 75–84 | 635 | 632 | 557 | 534 | 483 | 496 | 488 | 486 | 505 | 553 | 511 | 641 | 6,521 |
| | 85+ | 880 | 904 | 837 | 664 | 744 | 688 | 689 | 691 | 676 | 758 | 761 | 907 | 9,199 |
| | All ages | 2,067 | 2,020 | 1,886 | 1,667 | 1,704 | 1,580 | 1,625 | 1,623 | 1,603 | 1,767 | 1,743 | 2,037 | 21,322 |
| West Midlands | 0–64 | 297 | 306 | 311 | 294 | 305 | 288 | 244 | 267 | 295 | 285 | 292 | 307 | 3,491 |
| | 65–74 | 346 | 317 | 334 | 290 | 282 | 255 | 271 | 236 | 270 | 292 | 286 | 359 | 3,538 |
| | 75–84 | 843 | 796 | 744 | 701 | 637 | 671 | 670 | 612 | 583 | 650 | 691 | 766 | 8,364 |
| | 85+ | 1,054 | 1,108 | 1,071 | 967 | 880 | 845 | 804 | 888 | 770 | 885 | 934 | 1,193 | 11,399 |
| | All ages | 2,540 | 2,527 | 2,460 | 2,252 | 2,104 | 2,059 | 1,989 | 2,003 | 1,918 | 2,112 | 2,203 | 2,625 | 26,792 |
| East of England | 0–64 | 299 | 260 | 290 | 270 | 272 | 272 | 242 | 229 | 230 | 248 | 271 | 279 | 3,162 |
| | 65–74 | 282 | 280 | 280 | 266 | 286 | 248 | 247 | 280 | 239 | 270 | 270 | 304 | 3,252 |
| | 75–84 | 831 | 705 | 731 | 632 | 655 | 583 | 627 | 644 | 625 | 619 | 679 | 813 | 8,144 |
| | 85+ | 1,204 | 1,185 | 1,115 | 1,007 | 978 | 936 | 929 | 887 | 889 | 1,051 | 1,058 | 1,270 | 12,509 |
| | All ages | 2,616 | 2,430 | 2,416 | 2,175 | 2,191 | 2,039 | 2,045 | 2,040 | 1,983 | 2,188 | 2,278 | 2,666 | 27,067 |
| London | 0–64 | 346 | 300 | 350 | 326 | 326 | 335 | 301 | 331 | 320 | 309 | 307 | 339 | 3,890 |
| | 65–74 | 326 | 283 | 306 | 298 | 268 | 251 | 238 | 242 | 275 | 276 | 301 | 320 | 3,384 |
| | 75–84 | 776 | 649 | 668 | 607 | 556 | 569 | 575 | 544 | 547 | 594 | 618 | 706 | 7,409 |
| | 85+ | 1,054 | 969 | 966 | 854 | 907 | 783 | 799 | 789 | 738 | 836 | 917 | 1,086 | 10,698 |
| | All ages | 2,502 | 2,201 | 2,290 | 2,085 | 2,057 | 1,938 | 1,913 | 1,906 | 1,880 | 2,015 | 2,143 | 2,451 | 25,381 |
| South East | 0–64 | 396 | 378 | 374 | 393 | 422 | 387 | 387 | 385 | 366 | 424 | 376 | 439 | 4,727 |
| | 65–74 | 431 | 384 | 372 | 364 | 356 | 360 | 334 | 372 | 326 | 413 | 390 | 424 | 4,526 |
| | 75–84 | 1,098 | 1,028 | 1,006 | 966 | 932 | 828 | 917 | 862 | 814 | 890 | 994 | 1,077 | 11,412 |
| | 85+ | 1,781 | 1,780 | 1,697 | 1,581 | 1,521 | 1,482 | 1,444 | 1,452 | 1,410 | 1,521 | 1,631 | 1,952 | 19,252 |
| | All ages | 3,706 | 3,570 | 3,449 | 3,304 | 3,231 | 3,057 | 3,082 | 3,071 | 2,916 | 3,248 | 3,391 | 3,892 | 39,917 |
| South West | 0–64 | 285 | 245 | 258 | 255 | 246 | 241 | 218 | 247 | 229 | 250 | 274 | 265 | 3,013 |
| | 65–74 | 281 | 273 | 296 | 236 | 210 | 220 | 227 | 228 | 236 | 222 | 237 | 276 | 2,942 |
| | 75–84 | 765 | 702 | 773 | 683 | 626 | 601 | 614 | 632 | 575 | 697 | 656 | 735 | 8,059 |
| | 85+ | 1,388 | 1,303 | 1,262 | 1,121 | 1,038 | 1,002 | 993 | 1,009 | 1,000 | 1,117 | 1,154 | 1,273 | 13,660 |
| | All ages | 2,719 | 2,523 | 2,589 | 2,295 | 2,120 | 2,064 | 2,052 | 2,116 | 2,040 | 2,286 | 2,321 | 2,549 | 27,674 |
| Wales | 0–64 | 208 | 182 | 173 | 182 | 185 | 164 | 188 | 172 | 146 | 160 | 179 | 168 | 2,107 |
| | 65–74 | 218 | 223 | 204 | 202 | 204 | 185 | 172 | 157 | 190 | 180 | 184 | 209 | 2,328 |
| | 75–84 | 502 | 469 | 464 | 425 | 373 | 399 | 374 | 355 | 372 | 395 | 457 | 463 | 5,048 |
| | 85+ | 730 | 664 | 609 | 592 | 567 | 511 | 549 | 517 | 509 | 565 | 591 | 678 | 7,082 |
| | All ages | 1,658 | 1,538 | 1,450 | 1,401 | 1,329 | 1,259 | 1,283 | 1,201 | 1,217 | 1,300 | 1,411 | 1,518 | 16,565 |
| England | 0–64 | 2,846 | 2,602 | 2,719 | 2,658 | 2,673 | 2,513 | 2,485 | 2,490 | 2,463 | 2,599 | 2,644 | 2,855 | 31,547 |
| | 65–74 | 3,027 | 2,769 | 2,845 | 2,588 | 2,536 | 2,408 | 2,337 | 2,373 | 2,377 | 2,584 | 2,633 | 2,879 | 31,356 |
| | 75–84 | 7,320 | 6,721 | 6,695 | 6,170 | 5,819 | 5,567 | 5,732 | 5,606 | 5,477 | 5,967 | 6,146 | 7,020 | 74,240 |
| | 85+ | 10,474 | 10,248 | 9,861 | 8,842 | 8,490 | 8,062 | 8,056 | 8,042 | 7,827 | 8,765 | 9,139 | 10,908 | 108,714 |
| | All ages | 23,667 | 22,340 | 22,120 | 20,258 | 19,518 | 18,550 | 18,610 | 18,511 | 18,144 | 19,915 | 20,562 | 23,662 | 245,857 |
| England and Wales | 0–64 | 3,054 | 2,784 | 2,892 | 2,840 | 2,858 | 2,677 | 2,673 | 2,662 | 2,609 | 2,759 | 2,823 | 3,023 | 33,654 |
| | 65–74 | 3,245 | 2,992 | 3,049 | 2,790 | 2,740 | 2,593 | 2,509 | 2,530 | 2,567 | 2,764 | 2,817 | 3,088 | 33,684 |
| | 75–84 | 7,822 | 7,190 | 7,159 | 6,595 | 6,192 | 5,966 | 6,106 | 5,961 | 5,849 | 6,362 | 6,603 | 7,483 | 79,288 |
| | 85+ | 11,204 | 10,912 | 10,470 | 9,434 | 9,057 | 8,573 | 8,605 | 8,559 | 8,336 | 9,330 | 9,730 | 11,586 | 115,796 |
| | All ages | 25,325 | 23,878 | 23,570 | 21,659 | 20,847 | 19,809 | 19,893 | 19,712 | 19,361 | 21,215 | 21,973 | 25,180 | 262,422 |
| elsewhere | 0–64 | 12 | 11 | 9 | 13 | 15 | 19 | 19 | 21 | 18 | 11 | 12 | 15 | 175 |
| | 65–74 | 6 | 13 | 5 | 14 | 11 | 6 | 14 | 13 | 12 | 6 | 6 | 11 | 117 |
| | 75–84 | 11 | 6 | 4 | 14 | 9 | 7 | 10 | 4 | 9 | 11 | 6 | 7 | 98 |
| | 85+ | 9 | 6 | 2 | 6 | 2 | 3 | 2 | 4 | 5 | 1 | 3 | 8 | 51 |
| | All ages | 38 | 36 | 20 | 47 | 37 | 35 | 45 | 42 | 44 | 29 | 27 | 41 | 441 |

# Report:

# Health expectancies in the United Kingdom, 2004–06

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## Introduction

This report presents the latest figures on male and female health expectancy, at birth and at age 65, for the UK and its four constituent countries in 2004–06. While life expectancy (LE) provides an estimate of average expected life-span, healthy life expectancy (HLE) divides total LE into years spent in good or 'not good' health. Disability-free life expectancy (DFLE) divides LE into years lived with and without a chronic illness or disability.

These figures are three-year averages. LE is taken from the UK national interim life tables published annually by ONS, and the measures of health and chronic illness from the General Household Survey (GHS) in Great Britain and the Continuous Household Survey (CHS) in Northern Ireland.

## Interpretation of health expectancies

Health expectancies are an extension of LE indicators, and represent the period of time that an individual might expect to remain in good or fairly good health or free from a limiting chronic illness or disability if he or she experienced the particular age-specific rates for that time period and country throughout his or her life. Health expectancies reported here do not reflect the actual time a person can expect to live in good or fairly good health or without a limiting chronic illness or disability, as the current age-specific rates are likely to change in the future because of differing population structures and differing likelihood of health and illness resulting from changing risk profiles.

Health expectancies at birth are also not a guide to the remaining expectation of life in a given health state having survived to a given age. For example, if female HLE in England was 70 years at birth, HLE for women aged 65 years would exceed five years. This reflects the fact that health expectancies at a particular age depend only on the health expectancies beyond that age, whereas health expectancies at birth are dependent on health expectancies at every age.

Nevertheless, health expectancies are powerful indicators of the interactions between health and mortality and can be used to monitor the health of the population in relation to increased life expectancies over time and also between different geographical areas.

## Healthy life expectancy, 2004–06

Table 1 shows the 2004–06 figures for LE, HLE and DFLE at birth and at age 65 by sex for the UK and each constituent country. On average, males in the UK could expect to live in good or fairly good health (HLE) for 68.2 years at birth and 12.8 years at age 65. The equivalent figures for females were 70.4 and 14.5 years respectively.

Of the four constituent countries of the UK, England had the highest HLE at birth for both sexes. This was also true for females at age 65; but for males at this age, the figure for both England and Northern Ireland was 12.9 years.

For males, HLE at birth in England was 68.5 years, significantly higher than in Wales (66.7 years), Scotland (66.5 years) and Northern Ireland (66.9 years). There were no significant differences in HLE between constituent countries for males at age 65.

For females, HLE at birth was significantly higher in England than in Northern Ireland, and at age 65, significantly higher in England than in both Northern Ireland and Wales. HLE estimates for Scotland at birth were the second highest in the UK at 69.6 years; however, this country had the lowest LE. As a consequence, it is estimated that female residents of Scotland spend the least number of years in 'not good' health compared to other countries in the UK. The lowest HLE estimate for females at birth was in Northern Ireland (68.8 years), 1.6 years lower than the UK estimate. At age 65, the lowest HLE for females was in Wales at 13.3 years, 1.2 years lower than the UK estimate.

## Disability-free life expectancy, 2004–06

In 2004–06, newly born males in the UK could expect to live on average 62.4 years free from a limiting chronic illness or disability (DFLE), and 10.1 years at age 65. For females the equivalent DFLE figures were 63.9 years at birth and 10.6 years at age 65.

The variation in DFLE between countries of the UK was similar to the variation in HLE, except for Northern Ireland which had a significantly lower DFLE than England for males at age 65.

DFLE estimates for Scotland were the second highest in the UK for males at birth and at age 65. For females at age 65, DFLE was highest in

**Table 1** **Life expectancy, healthy life expectancy and disability-free life expectancy at birth and age 65: by country and sex, 2004–06**

United Kingdom

| | Country | Life expectancy | Healthy life expectancy | | | Disability-free life expectancy | | |
|---|---|---|---|---|---|---|---|---|
| | | Years | Years | Lower 95 per cent confidence interval | Upper 95 per cent confidence interval | Years | Lower 95 per cent confidence interval | Upper 95 per cent confidence interval |
| **At birth** | | | | | | | | |
| Males | United Kingdom | 76.9 | 68.2 | 67.9 | 68.4 | 62.4 | 62.1 | 62.7 |
| | Great Britain | 76.9 | 68.2 | 67.9 | 68.5 | 62.5 | 62.2 | 62.9 |
| | England | 77.2 | 68.5 | 68.2 | 68.8 | 62.8 | 62.4 | 63.2 |
| | Wales | 76.6 | 66.7* | 65.3 | 68.1 | 59.8* | 58.1 | 61.4 |
| | Scotland | 74.6 | 66.5* | 65.5 | 67.4 | 61.7 | 60.6 | 62.8 |
| | Northern Ireland | 76.1 | 66.9* | 66.3 | 67.5 | 60.0* | 59.4 | 60.6 |
| Females | United Kingdom | 81.3 | 70.4 | 70.1 | 70.7 | 63.9 | 63.6 | 64.2 |
| | Great Britain | 81.3 | 70.5 | 70.1 | 70.8 | 64.0 | 63.7 | 64.4 |
| | England | 81.5 | 70.7 | 70.3 | 71.0 | 64.1 | 63.7 | 64.5 |
| | Wales | 80.9 | 68.9 | 67.5 | 70.3 | 63.5 | 61.9 | 65.1 |
| | Scotland | 79.6 | 69.6 | 68.6 | 70.6 | 63.4 | 62.2 | 64.5 |
| | Northern Ireland | 81.0 | 68.8* | 68.2 | 69.4 | 60.7* | 60.0 | 61.3 |
| **At age 65** | | | | | | | | |
| Males | United Kingdom | 16.9 | 12.8 | 12.6 | 13.0 | 10.1 | 9.9 | 10.3 |
| | Great Britain | 16.9 | 12.8 | 12.6 | 13.1 | 10.1 | 9.9 | 10.4 |
| | England | 17.1 | 12.9 | 12.7 | 13.2 | 10.2 | 9.9 | 10.5 |
| | Wales | 16.7 | 12.3 | 11.4 | 13.3 | 9.5 | 8.4 | 10.5 |
| | Scotland | 15.8 | 12.2 | 11.5 | 12.9 | 9.8 | 9.0 | 10.6 |
| | Northern Ireland | 16.6 | 12.9 | 12.5 | 13.4 | 9.1* | 8.7 | 9.6 |
| Females | United Kingdom | 19.7 | 14.5 | 14.3 | 14.7 | 10.6 | 10.4 | 10.8 |
| | Great Britain | 19.7 | 14.5 | 14.3 | 14.8 | 10.7 | 10.4 | 11.0 |
| | England | 19.9 | 14.7 | 14.4 | 14.9 | 10.7 | 10.5 | 11.0 |
| | Wales | 19.5 | 13.3* | 12.3 | 14.3 | 9.8 | 8.7 | 10.9 |
| | Scotland | 18.6 | 14.2 | 13.5 | 14.8 | 10.7 | 9.9 | 11.5 |
| | Northern Ireland | 19.5 | 13.8* | 13.4 | 14.3 | 9.0* | 8.6 | 9.5 |

* Significantly different from England at the 95% level.

England and Scotland at 10.7 years. As Scotland has the lowest LE for both sexes, residents in Scotland could expect to live the least number of years with a disability compared to other UK countries.

For males, Wales had the lowest DFLE of all the constituent countries at birth (59.8 years) and Northern Ireland the lowest at age 65 (9.1 years). For females, Northern Ireland had the lowest DFLE estimates: 60.7 years at birth and 9.0 years at age 65.

## Trends in health expectancies

The pattern of health expectancies at birth and at age 65 by sex across countries of the UK in 2004–06 was predominantly similar to that reported in 2003–05.[1] There were, however, slight differences: Northern Ireland, for example, had the highest HLE for males at age 65 in 2003–05 but was equivalent to England in 2004–06. The year-on-year variation in ranking is partly due to the sampling variability of the estimates, arising from the use of survey data to estimate the proportion of life spent in good/fairly good health or without a limiting chronic illness or disability.

Table 2 shows both the 2000–02 and 2004–06 figures for LE, HLE and DFLE at birth and at age 65 by sex for the UK and each constituent country. With one exception (HLE for females at birth in Wales), estimates of HLE and DFLE rose over this period, indicating a general increase in the length of time that males and females may expect to live in good health and free from a limiting chronic illness or disability. For the UK as a whole, HLE and DFLE estimates rose significantly for males at birth and at age 65 between these years; for females, estimates of HLE increased significantly at age 65 and DFLE increased significantly at birth.

For the UK, between 2000–02 and 2004–06 HLE and DFLE estimates for males at birth rose by 1.4 and 2.1 years, and at age 65 by 0.9 and 1.3 years respectively. The equivalent increases for females were lower at 0.5 and 1.1 years at birth and 0.5 and 0.4 years at age 65.

There were significant increases over the period in estimated HLE and DFLE at birth and at age 65 for males in both England and Northern Ireland. In England, male HLE and DFLE estimates at birth rose by 1.4 and 2.1 years respectively, and 0.9 and 1.3 years at age 65. In Northern Ireland, estimates of HLE and DFLE at birth for males increased by 1.8 and 2.1 years respectively, and 1.8 and 1.5 years at age 65.

For females, there were significant increases in HLE at age 65 between 2000–02 and 2004–06 in Northern Ireland (1.3 years) and in DFLE in England at birth (1.1 years). In Wales, HLE for females at birth fell from 69.4 years in 2000–02 to 68.9 years in 2004–06.

When differences in the magnitude of change (or the absolute change in terms of number of years) between LE and the health expectancy estimates occur, the **proportions** of expected life spent healthy or free from a limiting chronic illness or disability also change. Comparisons over time in the proportion of life spent healthy are indicative of relative change that serves to establish whether gains in LE are matched by, fall short of, or exceed changes in the health expectancy estimates over the same period.

**Table 2** Life expectancy, healthy life expectancy and disability-free life expectancy, at birth and age 65: by country and sex, 2000–02 and 2004–06

United Kingdom

Years

| | Country | Life expectancy | | Healthy life expectancy | | Disability-free life expectancy | |
|---|---|---|---|---|---|---|---|
| | | 2000–02 | 2004–06 | 2000–02 | 2004–06 | 2000–02 | 2004–06 |
| **At birth** | | | | | | | |
| Males | United Kingdom | 75.7 | 76.9 | 66.8 | 68.2* | 60.3 | 62.4* |
| | Great Britain | 75.7 | 76.9 | 66.8 | 68.2* | 60.4 | 62.5* |
| | England | 76.0 | 77.2 | 67.1 | 68.5* | 60.7 | 62.8* |
| | Wales | 75.4 | 76.6 | 65.5 | 66.7 | 57.7 | 59.8 |
| | Scotland | 73.3 | 74.6 | 65.3 | 66.5 | 58.8 | 61.7* |
| | Northern Ireland | 75.2 | 76.1 | 65.1 | 66.9* | 57.9 | 60.0* |
| Females | United Kingdom | 80.4 | 81.3 | 69.9 | 70.4 | 62.8 | 63.9* |
| | Great Britain | 80.4 | 81.3 | 69.9 | 70.5 | 62.9 | 64.0* |
| | England | 80.6 | 81.5 | 70.1 | 70.7 | 63.0 | 64.1* |
| | Wales | 80.1 | 80.9 | 69.4 | 68.9 | 61.1 | 63.5 |
| | Scotland | 78.8 | 79.6 | 68.6 | 69.6 | 62.6 | 63.4 |
| | Northern Ireland | 80.1 | 81.0 | 67.2 | 68.8* | 59.7 | 60.7 |
| **At age 65** | | | | | | | |
| Males | United Kingdom | 15.9 | 16.9 | 11.9 | 12.8* | 8.8 | 10.1* |
| | Great Britain | 15.9 | 16.9 | 11.9 | 12.8* | 8.8 | 10.1* |
| | England | 16.1 | 17.1 | 12.0 | 12.9* | 8.9 | 10.2* |
| | Wales | 15.7 | 16.7 | 11.1 | 12.3 | 7.3 | 9.5* |
| | Scotland | 14.9 | 15.8 | 11.5 | 12.2 | 8.7 | 9.8 |
| | Northern Ireland | 15.7 | 16.6 | 11.1 | 12.9* | 7.6 | 9.1* |
| Females | United Kingdom | 19.0 | 19.7 | 14.0 | 14.5* | 10.2 | 10.6 |
| | Great Britain | 19.0 | 19.7 | 14.0 | 14.5* | 10.3 | 10.7 |
| | England | 19.2 | 19.9 | 14.2 | 14.7 | 10.4 | 10.7 |
| | Wales | 18.7 | 19.5 | 12.8 | 13.3 | 8.5 | 9.8* |
| | Scotland | 18.0 | 18.6 | 13.5 | 14.2 | 10.0 | 10.7 |
| | Northern Ireland | 18.7 | 19.5 | 12.5 | 13.8* | 8.5 | 9.0 |

* Significant difference between 2000–02 and 2004–06 at the 95% level.

The proportion of life spent in good or fairly good health in 2004–06 is largely consistent with 2000–02 estimates. The notable exception is Northern Ireland where males and females at age 65 have seen their proportions of life spent in good or fairly good health increase by 10 per cent and 6 per cent respectively.

Table 3 shows the 2000–02 and 2004–06 figures for the proportion of life free from a limiting chronic illness or disability, and the absolute change in months, at birth and at age 65 by sex for the UK and each constituent country.

Proportions of life spent free from a limiting chronic illness or disability mostly increased for males and females at birth and at age 65 over the period. At birth, males in the UK experienced a proportional gain in DFLE, representing an increase of more than 11 months after taking account of the gain in LE. The smaller gains of 11 months were observed in England and in Wales, while the greatest increase of 20 months occurred in Scotland. For females at birth, there were generally more modest increases in the proportion of life free from a limiting chronic illness or disability. In the UK, females at birth gained 2 months in absolute terms. The smallest proportional gain at birth for females occurred in Scotland where there was a negligible increase. The greatest proportional increase was in Wales, with a gain of 19 months after taking account of the gain in LE.

At age 65, due to lower life expectancies, changes over time represented in months are less than at birth, despite the often greater gains in the proportion of life free from a limiting chronic illness or disability. In the UK, males at age 65 gained 3 months in absolute terms free from a limiting chronic illness or disability between 2000–02 and 2004–06. In contrast to males at birth, the smallest proportional increase at age 65 occurred in Scotland: 2 months in absolute terms. The greatest proportional increase occurred in Wales: 14 months in absolute terms.

For females at age 65 in the UK, the proportion of LE spent free from limiting chronic illness or disability increased slightly between 2000–02 and 2004–06; however, this represented a fall of 3 months in absolute terms. The greatest proportional increase was in Wales, representing approximately 6 months in absolute terms. In England, a decrease in the proportion of life spent free from limiting chronic illness or disability was observed, resulting in a fall of 4 months of life free from a limiting chronic illness or disability in absolute terms.

Trends since 2000–02 in disability-free life expectancy for males and females at birth in the UK and constituent countries continue to support the notion of a compression of morbidity over time, where periods of ill-health with disability decline prior to death in an ageing population.[2] Indeed, the estimates presented suggest a predominant pattern of increasing proportions of life spent free from a limiting chronic illness or disability, using the current methodology, between 2000–02 and 2004–06.

## Methods

ONS produces two measures of health expectancy: HLE defined as expected years of life in good or fairly good health; and DFLE, defined as expected years of life free from a limiting chronic illness or disability. UK health expectancies are calculated using the Sullivan method incorporating national period life expectancies.[3,4] Briefly, prevalence rates of self-reported good/'not good' health or with/without a limiting chronic illness or disability by country, sex and five-year age band are calculated partly from responses to the GHS and CHS aggregated over three years.

**Table 3** Proportion of life spent free from disability, at birth and age 65: by country and sex, 2000–02 and 2004–06

United Kingdom — Per cent, months

| Country | | Proportion of life free from disability | | Absolute gain over the period |
|---|---|---|---|---|
| | | 2000–02 | 2004–06 | |
| | | Per cent | Per cent | Months |
| **At birth** | | | | |
| Males | United Kingdom | 79.7 | 81.2 | 11 |
| | Great Britain | 79.8 | 81.3 | 11 |
| | England | 79.9 | 81.3 | 11 |
| | Wales | 76.5 | 78.1 | 11 |
| | Scotland | 80.2 | 82.7 | 20 |
| | Northern Ireland | 77.0 | 78.8 | 14 |
| Females | United Kingdom | 78.1 | 78.6 | 2 |
| | Great Britain | 78.2 | 78.8 | 3 |
| | England | 78.2 | 78.7 | 3 |
| | Wales | 76.3 | 78.5 | 19 |
| | Scotland | 79.4 | 79.6 | – |
| | Northern Ireland | 74.5 | 74.9 | 1 |
| **At age 65** | | | | |
| Males | United Kingdom | 55.3 | 59.7 | 3 |
| | Great Britain | 55.3 | 59.9 | 4 |
| | England | 55.3 | 59.7 | 4 |
| | Wales | 46.5 | 56.9 | 14 |
| | Scotland | 58.4 | 61.8 | 2 |
| | Northern Ireland | 48.4 | 54.8 | 7 |
| Females | United Kingdom | 53.7 | 53.9 | –3 |
| | Great Britain | 54.2 | 54.3 | –4 |
| | England | 54.2 | 54.0 | –4 |
| | Wales | 45.5 | 50.2 | 6 |
| | Scotland | 55.6 | 57.5 | 1 |
| | Northern Ireland | 45.5 | 46.2 | –4 |

Note: Calculations based on rounded LE figures and unrounded DFLE figures.

Because the GHS and CHS do not include residents of communal establishments, such as nursing homes, the prevalence of the various health states in this population is based on data from the 2001 Census for all the years covered. The proportion of the population in communal establishments is adjusted to match current aggregated mid-year population estimates.[5]

Combined survey and communal establishment prevalence rates are multiplied by the total person years lived at a given age interval, calculated from aggregated mid-year population estimates and period life tables to give the total number of person years lived at that age interval in good/'not good' health or with/without a limiting chronic illness or disability. The total number of person years in good health, or without a limiting chronic illness or disability, at a given age, is then divided by the number of people surviving to that age to give an estimate of HLE or DFLE. Significant differences between countries and over time are indicated by non-overlapping 95 per cent confidence intervals. The methods and the data sources used to calculate health expectancies are reported in further detail in the article 'Review of sources and methods to monitor healthy life expectancy' published in *Health Statistics Quarterly* 26.[6]

The design of survey sources has remained unchanged for the calculation of health expectancy estimates between 2000–02 and 2003–05; however, in 2006 the GHS changed to a longitudinal (rotating panel) design. Consequently, the 2006 sample is composed of both follow-up respondents and new entrants to the survey. In order to maintain the cross-sectional nature of the data used to compile ONS estimates of HLE and DFLE, the analysis presented here is based on only new entrants, approximately one third of the total sample in 2006, combined with full samples from 2004 and 2005. This change results in a loss of approximately 22 per cent of the survey sample for England, Wales and Scotland in the aggregated dataset used to construct the 2004–06 estimate. Compared to previous years, therefore, the ability to identify significant differences between countries and changes over time in 2004–06 is diminished due the relatively lower contribution of survey data from 2006 to the aggregated dataset. The effect of further reductions in sample size on future ONS estimates of HLE and DFLE is under investigation and will be reported in a future article in *Health Statistics Quarterly*.

## Website report and results

The results in this report can also be found on the Office for National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=12964

Figures on the Office for National Statistics website include estimates of LE, HLE and DFLE for the UK, Great Britain, England, Scotland, Wales and Northern Ireland from 2000–02 to 2004–06. For Great Britain and England, long-term health expectancies trend data are also available for the period 1981 to 2001. All estimates (with 95 per cent confidence intervals) are presented along with the corresponding life expectancy figures.[7]

Independent in-depth analyses of Scottish health expectancies figures can be found on the Scottish Public Health Observatory website, accessed 8 October 2008, available at:
www.scotpho.org.uk/hle

## Further information

If you require further information on the data presented here please contact:

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## References

1. Office for National Statistics (2008) 'Health expectancies in the United Kingdom, 2004', *Health Statistics Quarterly* **37**, 66–69. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
2. Fries J F (1980) 'Ageing, natural death, and the compression of morbidity', *New England Journal of Medicine*, **3**, 407–28.
3. Jagger C (1999) Health Expectancy Calculation by the Sullivan Method: A Practical Guide, NUPRI Research Paper Series No 68, Toyko.
4. Period life tables are available to download from the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14459
5. Un-rounded mid-year population estimates are available directly from the Office for National Statistics Population Estimates Unit: popinfo@ons.gsi.gov.uk
6. Breakwell C and Bajekal M (2005) 'Review of sources and methods to monitor Healthy Life Expectancy', *Health Statistics Quarterly* **26**, 17–22. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
7. Office for National Statistics health expectancy estimates from 1981 are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=12964

# Report:

# Life expectancy at birth and at age 65 by local areas in the United Kingdom, 2005–07

**Claudia Wells and Emma Gordon**
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## Introduction

This report presents the latest figures on male and female period life expectancy at birth and at age 65 for local areas in the UK, constituent countries and English regions for 2005–07. The term local area refers to local and unitary authorities in England and Wales, council areas in Scotland and local government district areas in Northern Ireland. These figures were calculated by the Office for National Statistics (ONS), except those for Scotland which were calculated by the General Register Office for Scotland (GROS) using the same methods.

All figures are three-year averages, produced by aggregating deaths and population estimates across each three-year period, to provide large enough numbers to ensure that the figures presented are sufficiently robust. Two local authorities, City of London and Isles of Scilly, are excluded from the results because of the small populations and small numbers of deaths.

## Interpretation of period life expectancy

All figures presented here are period life expectancies. Period expectation of life at a given age for an area in a given time period is an estimate of the average number of years a person of that age would survive if he or she experienced the particular area's age-specific mortality rates for that time period throughout the rest of his or her life. The figure reflects mortality among those living in the area in each time period, rather than mortality among those born in each area. It is not therefore the number of years a person in the area in each time period could actually expect to live, both because the death rates of the area are likely to change in the future and because many of those in the area will live elsewhere for at least some part of their lives.

Period life expectancy at birth is also not a guide to the remaining expectation of life at any given age. For example, if female life expectancy was 80 years for a particular area, life expectancy of women aged 65 years in that area would exceed 15 years. This reflects the fact that survival from a particular age depends only on the mortality rates beyond that age, whereas survival from birth is based on mortality rates at every age.

## Life expectancy at birth

Results for 2005–07 show a familiar geographic pattern, with inequalities in life expectancy continuing to persist across the UK. The South West, South East and East of England continued to have the highest life expectancies at birth, while figures were lowest in Scotland, the North West of England and Northern Ireland. For males there was a difference of 4.1 years between Scotland as a whole which had the lowest life expectancy (74.8 years), and the South East of England where life expectancy was highest (78.9 years). For females the gap between Scotland and the South West of England (79.7 and 82.9 years respectively) was 3.2 years.

The local areas with the highest and lowest male and female life expectancy at birth in the UK in 2005–07 are presented in Tables 1 and 2 respectively.

**Table 1** **Local areas with the highest and lowest male life expectancy at birth, 2005–07**

United Kingdom

| Rank | Local area | Country/English Government Office Region | Life expectancy at birth (years) |
|---|---|---|---|
| **Highest life expectancy at birth** | | | |
| 1 | Kensington and Chelsea | London | 83.7 |
| 2 | Westminster | London | 81.5 |
| 3 | East Dorset | South West | 81.3 |
| 4 | Elmbridge | South East | 81.1 |
| 5 | Hart | South East | 81.0 |
| 6 | Fareham | South East | 80.9 |
| 7 | Wokingham | South East | 80.8 |
| 8 | Sevenoaks | South East | 80.7 |
| 9 | Three Rivers | East of England | 80.6 |
| 10 | Cotswold | South West | 80.6 |
| **Lowest life expectancy at birth** | | | |
| 432 | Glasgow City | Scotland | 70.8 |
| 431 | West Dunbartonshire | Scotland | 71.9 |
| 430 | Inverclyde | Scotland | 72.5 |
| 429 | North Lanarkshire | Scotland | 72.7 |
| 428 | Eilean Siar | Scotland | 72.9 |
| 427 | Blackpool | North West | 73.2 |
| 426 | Manchester | North West | 73.4 |
| 425 | Belfast | Northern Ireland | 73.6 |
| 424 | Renfrewshire | Scotland | 73.7 |
| 423 | North Ayrshire | Scotland | 73.7 |

**Table 2** Local areas with the highest and lowest female life expectancy at birth, 2005–07

United Kingdom

| Rank | Local area | Country/English Government Office Region | Life expectancy at birth (years) |
|---|---|---|---|
| **Highest life expectancy at birth** | | | |
| 1 | Kensington and Chelsea | London | 87.8 |
| 2 | East Dorset | South West | 85.0 |
| 3 | Rutland | East Midlands | 84.7 |
| 4 | Hart | South East | 84.7 |
| 5 | Westminster | London | 84.6 |
| 6 | Christchurch | South West | 84.5 |
| 7 | Chiltern | South East | 84.4 |
| 8 | Rochford | East of England | 84.4 |
| 9 | South Cambridgeshire | East of England | 84.4 |
| 10 | Epsom and Ewell | South East | 84.4 |
| **Lowest life expectancy at birth** | | | |
| 432 | Glasgow City | Scotland | 77.1 |
| 431 | East Ayrshire | Scotland | 77.9 |
| 430 | West Dunbartonshire | Scotland | 77.9 |
| 429 | Hartlepool | North East | 78.1 |
| 428 | Inverclyde | Scotland | 78.2 |
| 427 | North Lanarkshire | Scotland | 78.4 |
| 426 | Halton | North West | 78.6 |
| 425 | Blaenau Gwent | Wales | 78.7 |
| 424 | Liverpool | North West | 78.7 |
| 423 | Renfrewshire | Scotland | 78.7 |

As in 2004–06, the local area with lowest male life expectancy was Glasgow City (70.8 years). The local area with the highest life expectancy for males was Kensington and Chelsea (83.7 years), 12.9 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy for females (87.8 years), 10.7 years more than Glasgow City, the area with the lowest figure (77.1 years).

## Life expectancy at age 65

Life expectancies at age 65 for the constituent countries of the UK and English regions in 2005–07 show a similar geographical pattern to the results at birth. The lowest estimates were in Scotland and the North East of England; the highest were in the South East and South West of England. Men in Scotland had a life expectancy at 65 of 16.1 years, 2.1 years lower than the result for men in the South East and South West who could expect to live another 18.2 years. The gap between the areas with the highest and lowest life expectancies at 65 for women was similar to the gap for men. Women in Scotland had a life expectancy at 65 of 18.8 years, 2.2 years lower than women in the South West of England (21.0 years).

**Table 3** Local areas with the highest and lowest male life expectancy at age 65, 2005–07

United Kingdom

| Rank | Local area | Country/English Government Office Region | Life expectancy at age 65 (years) |
|---|---|---|---|
| **Highest life expectancy at age 65** | | | |
| 1 | Kensington and Chelsea | London | 22.7 |
| 2 | Westminster | London | 21.2 |
| 3 | Crawley | South East | 20.3 |
| 4 | South Shropshire | West Midlands | 19.7 |
| 5 | Christchurch | South West | 19.7 |
| 6 | Lewes | South East | 19.5 |
| 7 | East Dorset | South West | 19.4 |
| 8 | Guildford | South East | 19.4 |
| 9 | Rutland | East Midlands | 19.4 |
| 10 | Tandridge | South East | 19.3 |
| **Lowest life expectancy at age 65** | | | |
| 432 | Glasgow City | Scotland | 13.8 |
| 431 | North Lanarkshire | Scotland | 14.9 |
| 430 | West Dunbartonshire | Scotland | 15.0 |
| 429 | Inverclyde | Scotland | 15.1 |
| 428 | Renfrewshire | Scotland | 15.2 |
| 427 | North Ayrshire | Scotland | 15.4 |
| 426 | Manchester | North West | 15.5 |
| 425 | East Ayrshire | Scotland | 15.5 |
| 424 | Liverpool | North West | 15.5 |
| 423 | Hartlepool | North East | 15.5 |

**Table 4** Local areas with the highest and lowest female life expectancy at age 65, 2005–07

United Kingdom

| Rank | Local area | Country/English Government Office Region | Life expectancy at age 65 (years) |
|---|---|---|---|
| **Highest life expectancy at age 65** | | | |
| 1 | Kensington and Chelsea | London | 25.2 |
| 2 | East Dorset | South West | 22.7 |
| 3 | Rutland | East Midlands | 22.7 |
| 4 | Westminster | London | 22.6 |
| 5 | Hammersmith and Fulham | London | 22.3 |
| 6 | Brent | London | 22.3 |
| 7 | Lewes | South East | 22.2 |
| 8 | Christchurch | South West | 22.2 |
| 9 | Purbeck | South West | 22.2 |
| 10 | West Somerset | South West | 22.1 |
| **Lowest life expectancy at age 65** | | | |
| 432 | Glasgow City | Scotland | 17.4 |
| 431 | West Dunbartonshire | Scotland | 17.6 |
| 430 | West Lothian | Scotland | 17.7 |
| 429 | East Ayrshire | Scotland | 17.8 |
| 428 | Renfrewshire | Scotland | 17.8 |
| 427 | North Lanarkshire | Scotland | 17.8 |
| 426 | Hartlepool | North East | 18.0 |
| 425 | Halton | North West | 18.0 |
| 424 | Liverpool | North West | 18.1 |
| 423 | Burnley | North West | 18.1 |

The local areas with the highest and lowest life expectancy at age 65 for men and women in the UK in 2005–07 are presented in Tables 3 and 4 respectively.

At local area level in 2005–06, Glasgow City had the lowest male life expectancy at age 65 (13.8 years). This was the only area in the UK where the life expectancy at age 65 was less than 14 years. The local area with the highest male life expectancy at 65 was Kensington and Chelsea (22.7 years), 8.9 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy at 65 for women (25.2), 7.8 years more than Glasgow City, the area with the lowest figure (17.4 years)

Table 5 includes results for all local areas in the UK for both life expectancy at birth and life expectancy at 65 for 2005–07, and their relative rank order. Results are presented alphabetically by local area name within each constituent country and English region.

## Methods

### Calculation

Abridged life tables were constructed using standard methods.[1,2] Separate tables were constructed for males and females. The tables were created using annual mid-year population estimates and deaths registered in each year. A detailed description of the standard methods and notation associated with the calculation of life expectancy can be found on the Office for National Statistics website.[3,4]

The calculation of confidence intervals (available on the Office for National Statistics website) used the method developed by Chiang.[5] A report which details research undertaken by ONS to compare methodologies to allow the calculation of confidence intervals for life expectancy at birth has been published in the National Statistics Methodology Series. The report, 'Life expectancy at birth: methodological options for small populations' also presents research carried out to establish if there is a minimum population size below which the calculation of life expectancy may not be considered feasible.[6]

Using the recommendations included in this report ONS has previously published experimental life expectancy at birth figures for wards in England and Wales based on deaths from 1999–2003.[7]

An example of a life table constructed using the same method used to calculate life expectancy and confidence intervals in this report can be found at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

### Comparison with national results

The national interim life tables are the definitive life expectancy figures for the entire UK and constituent countries. National interim life tables are calculated using complete life tables (based on single years of age) and are published separately on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14459

To provide comparisons for local area and regional figures, ONS has also calculated national life expectancy results, which are included in Table 1. These were produced using the same methods as the sub-national results, with abridged life tables in which deaths and populations are aggregated into age groups. Therefore the two sets of national figures may differ very slightly (normally by less than 0.1 years for England and Wales).

Figures for England will also differ slightly from the national interim life table results because of a difference in the handling of deaths of non-residents. For this report, the deaths of non-residents have been included in the mortality figures for England and Wales but are excluded from the data for England and Wales separately. However, for the national interim tables, the deaths of non-residents in England and Wales have been included in the mortality data for England (but not Wales).

### Differences between period and cohort life expectancies

Expectations of life can be calculated in two ways, period life expectancy (as presented in this report) and cohort life expectancy.

Cohort life expectancies are calculated using age-specific mortality rates which allow for known or projected changes in mortality in later years and are therefore regarded as a more appropriate measure of how long a person of a given age would be expected to live, on average, than period life expectancy.

For example, period life expectancy at age 65 in 2000 would be worked out using the mortality rate for age 65 in 2000, for age 66 in 2000, for age 67 in 2000, and so on. Cohort life expectancy at age 65 in 2000 would be worked out using the mortality rate for age 65 in 2000, for age 66 in 2001, for age 67 in 2002, and so on.

Period life expectancies are a useful measure of mortality rates actually experienced over a given period and, for past years, provide an objective means of comparison of the trends in mortality over time, between areas of a country and with other countries. Official life tables in the UK and in other countries which relate to past years are generally period life tables for these reasons. Cohort life expectancies, even for past years, usually require projected mortality rates for their calculation and hence, in such cases, involve an element of subjectivity.

More information on the differences between period and cohort life expectancies can be found on the Office for National Statistics website.[8]

## Results on the Office for National Statistics website

The results presented in this report can also be found presented with 95 per cent confidence intervals in a series of Excel workbooks on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

The four workbooks contain:

- Results for the United Kingdom – figures for 1991–93 to 2005–07 for the UK, England and Wales, England, Wales, Scotland and Northern Ireland. Tables are also included showing the rank order of local areas in the UK in 2005–07
- Results for England and Wales – figures for 1991–93 to 2005–07 for local authorities in England and Wales, counties in England and Government Office regions in England.
- Results for Scotland – figures for 1991–93 to 2005–07 for council areas and health boards in Scotland
- Results for Northern Ireland – figures for 1991–93 to 2005–07 for local government district areas and health and social service boards in Northern Ireland

Results for 1991–93 to 2005–07 have also been published on the Office for National Statistics website as a set of animated maps to show the change in life expectancy at local area level over time, these are available at: www.statistics.gov.uk/CCI/nugget.asp?ID=1850&Pos=1&ColRank=1&Rank=374

Life expectancy results for local areas in Scotland for 2005–07 were first published in a report on the 25 September 2007 on the GROS website, accessed on 7 October 2008, available at: www.gro-scotland.gov.uk/statistics/publications-and-data/life-expectancy/index.html

Results for Scotland and other small areas within Scotland can also be found on the Scottish Public Health Observatory website, accessed 7 October 2008, available at: www.scotpho.org.uk/home/Comparativehealth/Profiles/chp_profiles.asp

### Further information

If you require additional information on the data presented here please contact:

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## References

1. Newell C (1994) *Methods and Models in Demography*, John Wiley & Sons: Chichester.
2. Shyrock H S and Siegel J S (1976) *The Methods and Materials of Demography* (abridged edition), Academic Press: New York.
3. Government Actuary's Department, Interim Life Tables methodology, accessed 7 October 2008, available at: www.gad.gov.uk/Demography_Data/Life_Tables/Methodology.asp
4. Government Actuary's Department, Interim Life Tables notation, accessed 7 October 2008, available at: www.gad.gov.uk/Demography_Data/Life_Tables/Notation.asp
5. Chiang C L (1968) 'The life table and its construction' in *Introduction to Stochastic Processes in Biostatistics*, Chapter 9, John Wiley & Sons: New York, 189–214.

6. Toson B and Baker A (2003) 'Life expectancy at birth: methodological options for small populations', National Statistics Methodological Series no. 33. Available on the Office for National Statistics website at: www.statistics.gov.uk/methods_quality/publications.asp
7. Office for National Statistics (2006) 'Life expectancy at birth for wards in England and Wales'. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14466
8. Office for National Statistics (2006) 'Period and cohort life expectancy tables'. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=15098

**Table 5** **Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07**

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| **United Kingdom** | 77.3 | | 17.3 | | 81.5 | | 20.0 | |
| **England and Wales** | 77.5 | | 17.4 | | 81.7 | | 20.1 | |
| **England** | 77.6 | | 17.5 | | 81.8 | | 20.2 | |
| **Government Office Regions and local areas within England** | | | | | | | | |
| **North East** | 76.3 | | 16.5 | | 80.4 | | 19.0 | |
| Alnwick | 78.6 | 138 | 17.9 | 162 | 81.4 | 277 | 19.9 | 263 |
| Berwick-upon-Tweed | 78.8 | 119 | 18.9 | 31 | 83.6 | 39 | 21.1 | 81 |
| Blyth Valley | 76.3 | 331 | 16.0 | 395 | 80.0 | 390 | 18.6 | 404 |
| Castle Morpeth | 78.6 | 137 | 18.3 | 100 | 82.4 | 168 | 20.2 | 214 |
| Chester-le-Street | 77.0 | 274 | 16.4 | 361 | 80.7 | 338 | 19.2 | 352 |
| Darlington | 76.3 | 335 | 16.9 | 313 | 80.4 | 364 | 19.2 | 354 |
| Derwentside | 76.1 | 346 | 16.1 | 387 | 80.3 | 374 | 18.5 | 411 |
| Durham | 77.5 | 239 | 17.1 | 284 | 81.2 | 293 | 19.4 | 325 |
| Easington | 75.8 | 367 | 15.9 | 401 | 79.2 | 413 | 18.5 | 409 |
| Gateshead | 75.8 | 368 | 16.8 | 330 | 80.4 | 365 | 19.0 | 376 |
| Hartlepool | 75.1 | 398 | 15.5 | 423 | 78.1 | 429 | 18.0 | 426 |
| Middlesbrough | 75.0 | 403 | 16.0 | 396 | 79.6 | 402 | 18.7 | 397 |
| Newcastle upon Tyne | 75.7 | 371 | 16.3 | 372 | 80.5 | 353 | 19.2 | 359 |
| North Tyneside | 76.7 | 305 | 16.6 | 343 | 80.9 | 322 | 19.4 | 326 |
| Redcar and Cleveland | 76.7 | 304 | 17.0 | 300 | 80.8 | 328 | 19.6 | 312 |
| Sedgefield | 76.4 | 322 | 16.2 | 377 | 80.1 | 384 | 18.7 | 398 |
| South Tyneside | 75.6 | 377 | 16.2 | 384 | 80.4 | 358 | 19.0 | 371 |
| Stockton-on-Tees | 76.5 | 320 | 16.8 | 335 | 80.8 | 331 | 18.9 | 385 |
| Sunderland | 75.6 | 376 | 15.9 | 404 | 80.2 | 379 | 18.6 | 402 |
| Teesdale | 78.0 | 209 | 17.6 | 206 | 81.8 | 227 | 19.9 | 267 |
| Tynedale | 79.0 | 113 | 18.0 | 139 | 82.0 | 203 | 20.0 | 253 |
| Wansbeck | 76.2 | 337 | 16.7 | 336 | 80.0 | 388 | 18.5 | 410 |
| Wear Valley | 76.0 | 357 | 16.0 | 393 | 79.6 | 406 | 18.7 | 393 |
| **North West** | 76.0 | | 16.6 | | 80.4 | | 19.3 | |
| Allerdale | 76.9 | 292 | 16.7 | 341 | 80.7 | 335 | 19.4 | 329 |
| Barrow-in-Furness | 76.0 | 353 | 16.2 | 378 | 80.9 | 318 | 20.1 | 230 |
| Blackburn with Darwen | 74.2 | 418 | 15.8 | 416 | 79.2 | 412 | 18.2 | 421 |
| Blackpool | 73.2 | 427 | 16.1 | 389 | 79.0 | 420 | 18.6 | 406 |
| Bolton | 75.1 | 396 | 16.1 | 386 | 79.6 | 400 | 18.8 | 387 |
| Burnley | 75.4 | 384 | 16.8 | 324 | 79.0 | 419 | 18.1 | 423 |
| Bury | 76.6 | 313 | 16.6 | 354 | 80.6 | 351 | 19.2 | 353 |
| Carlisle | 76.7 | 302 | 16.9 | 318 | 81.1 | 302 | 20.2 | 207 |
| Chester | 78.3 | 179 | 17.9 | 165 | 82.0 | 205 | 20.4 | 191 |
| Chorley | 77.4 | 248 | 16.8 | 329 | 81.4 | 269 | 19.6 | 307 |
| Congleton | 78.6 | 135 | 17.9 | 161 | 82.7 | 125 | 21.0 | 97 |
| Copeland | 76.6 | 308 | 16.6 | 348 | 80.7 | 339 | 19.3 | 344 |
| Crewe and Nantwich | 77.0 | 280 | 17.1 | 290 | 81.5 | 266 | 19.6 | 301 |
| Eden | 78.2 | 181 | 17.8 | 173 | 83.0 | 92 | 20.9 | 108 |
| Ellesmere Port & Neston | 77.2 | 265 | 17.6 | 201 | 81.8 | 225 | 20.2 | 223 |
| Fylde | 78.7 | 126 | 17.8 | 172 | 81.7 | 245 | 20.1 | 236 |
| Halton | 74.5 | 415 | 15.8 | 412 | 78.6 | 426 | 18.0 | 425 |
| Hyndburn | 75.4 | 387 | 16.6 | 345 | 79.9 | 392 | 19.0 | 377 |
| Knowsley | 74.9 | 407 | 15.7 | 418 | 79.2 | 415 | 18.2 | 418 |
| Lancaster | 76.8 | 301 | 17.2 | 274 | 81.3 | 279 | 19.9 | 271 |
| Liverpool | 73.9 | 421 | 15.5 | 424 | 78.7 | 424 | 18.1 | 424 |
| Macclesfield | 79.2 | 94 | 18.2 | 118 | 82.8 | 119 | 20.7 | 148 |
| Manchester | 73.4 | 426 | 15.5 | 426 | 78.9 | 422 | 18.6 | 400 |
| Oldham | 75.3 | 391 | 15.9 | 405 | 79.2 | 414 | 18.3 | 416 |
| Pendle | 76.1 | 349 | 16.9 | 311 | 80.5 | 356 | 20.0 | 252 |
| Preston | 75.0 | 399 | 16.1 | 390 | 79.9 | 393 | 18.9 | 378 |
| Ribble Valley | 78.8 | 123 | 17.7 | 190 | 82.8 | 115 | 20.2 | 222 |
| Rochdale | 75.1 | 395 | 16.0 | 399 | 79.6 | 403 | 18.9 | 386 |
| Rossendale | 75.4 | 383 | 15.8 | 413 | 80.3 | 375 | 18.6 | 405 |
| Salford | 74.6 | 410 | 15.8 | 415 | 79.0 | 417 | 18.6 | 403 |
| Sefton | 76.6 | 314 | 17.2 | 273 | 81.4 | 276 | 19.6 | 302 |
| South Lakeland | 79.4 | 70 | 18.8 | 36 | 83.1 | 83 | 21.0 | 104 |
| South Ribble | 77.5 | 240 | 17.5 | 221 | 81.6 | 248 | 19.9 | 259 |
| St. Helens | 75.4 | 388 | 15.9 | 400 | 80.0 | 386 | 19.0 | 375 |
| Stockport | 77.4 | 247 | 17.1 | 275 | 82.1 | 191 | 20.6 | 152 |
| Tameside | 75.3 | 390 | 15.9 | 410 | 79.6 | 404 | 18.3 | 415 |
| Trafford | 77.7 | 228 | 17.5 | 224 | 82.0 | 211 | 20.2 | 221 |
| Vale Royal | 78.0 | 199 | 17.3 | 254 | 81.3 | 287 | 19.6 | 306 |
| Warrington | 76.4 | 327 | 16.3 | 376 | 80.8 | 332 | 19.2 | 355 |
| West Lancashire | 77.7 | 230 | 17.0 | 301 | 80.6 | 345 | 18.9 | 380 |
| Wigan | 75.4 | 386 | 15.9 | 408 | 79.6 | 405 | 18.5 | 407 |
| Wirral | 75.7 | 370 | 16.6 | 352 | 80.9 | 319 | 19.8 | 279 |
| Wyre | 77.0 | 273 | 17.2 | 271 | 81.3 | 288 | 19.7 | 294 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

**Table 5 continued** **Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07**

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| **Yorkshire and The Humber** | 76.9 | | 17.1 | | 81.1 | | 19.7 | |
| Barnsley | 75.5 | 381 | 16.0 | 392 | 79.8 | 395 | 18.5 | 412 |
| Bradford | 75.9 | 360 | 16.5 | 355 | 79.8 | 396 | 18.9 | 381 |
| Calderdale | 76.7 | 303 | 17.1 | 291 | 81.4 | 278 | 19.8 | 280 |
| Craven | 79.7 | 51 | 18.7 | 46 | 83.3 | 64 | 20.9 | 110 |
| Doncaster | 76.0 | 356 | 16.6 | 350 | 80.6 | 341 | 19.3 | 348 |
| East Riding of Yorkshire | 78.6 | 139 | 18.0 | 145 | 81.9 | 214 | 20.2 | 215 |
| Hambleton | 79.2 | 92 | 18.2 | 106 | 83.4 | 51 | 21.3 | 43 |
| Harrogate | 79.6 | 55 | 18.4 | 77 | 82.7 | 132 | 20.7 | 140 |
| Kingston upon Hull, City of | 74.8 | 409 | 16.0 | 397 | 79.1 | 416 | 18.4 | 414 |
| Kirklees | 76.5 | 318 | 16.9 | 310 | 80.6 | 349 | 19.1 | 366 |
| Leeds | 76.9 | 288 | 17.2 | 269 | 81.8 | 234 | 20.3 | 202 |
| North East Lincolnshire | 76.0 | 352 | 16.6 | 347 | 80.8 | 330 | 19.7 | 298 |
| North Lincolnshire | 77.1 | 268 | 17.3 | 259 | 81.1 | 303 | 19.8 | 284 |
| Richmondshire | 79.3 | 78 | 18.5 | 66 | 81.7 | 242 | 20.2 | 219 |
| Rotherham | 76.2 | 338 | 16.5 | 358 | 80.6 | 347 | 19.2 | 357 |
| Ryedale | 78.4 | 168 | 17.8 | 182 | 82.3 | 173 | 21.7 | 25 |
| Scarborough | 76.8 | 299 | 17.4 | 241 | 81.6 | 251 | 20.4 | 184 |
| Selby | 78.2 | 182 | 17.3 | 261 | 82.5 | 159 | 20.2 | 220 |
| Sheffield | 77.2 | 260 | 17.2 | 266 | 81.2 | 291 | 19.7 | 295 |
| Wakefield | 76.3 | 330 | 16.5 | 356 | 80.6 | 352 | 19.2 | 349 |
| York | 78.6 | 147 | 18.0 | 138 | 83.4 | 53 | 21.0 | 85 |
| **East Midlands** | 77.6 | | 17.3 | | 81.6 | | 20.0 | |
| Amber Valley | 78.1 | 193 | 17.6 | 208 | 82.2 | 180 | 20.5 | 168 |
| Ashfield | 76.1 | 348 | 16.2 | 380 | 80.6 | 343 | 19.3 | 345 |
| Bassetlaw | 76.9 | 287 | 17.0 | 306 | 81.1 | 305 | 19.2 | 350 |
| Blaby | 80.0 | 26 | 19.2 | 14 | 83.2 | 73 | 21.3 | 47 |
| Bolsover | 76.4 | 323 | 15.9 | 407 | 80.7 | 340 | 18.7 | 396 |
| Boston | 76.3 | 328 | 17.1 | 278 | 81.2 | 298 | 19.7 | 299 |
| Broxtowe | 78.6 | 136 | 17.3 | 253 | 82.2 | 185 | 20.0 | 250 |
| Charnwood | 78.4 | 159 | 17.5 | 229 | 82.7 | 131 | 20.6 | 153 |
| Chesterfield | 76.8 | 296 | 16.8 | 326 | 81.2 | 299 | 19.3 | 337 |
| Corby | 74.6 | 412 | 16.4 | 362 | 80.2 | 377 | 19.3 | 346 |
| Daventry | 78.5 | 155 | 17.9 | 154 | 82.1 | 197 | 20.0 | 251 |
| Derby | 77.0 | 277 | 17.1 | 279 | 81.9 | 222 | 20.3 | 204 |
| Derbyshire Dales | 79.3 | 87 | 18.3 | 97 | 82.8 | 117 | 20.4 | 187 |
| East Lindsey | 77.5 | 241 | 17.9 | 167 | 81.9 | 221 | 20.0 | 242 |
| East Northamptonshire | 78.9 | 116 | 17.9 | 170 | 81.0 | 314 | 19.3 | 340 |
| Erewash | 77.3 | 254 | 17.0 | 299 | 81.3 | 281 | 19.8 | 277 |
| Gedling | 78.6 | 133 | 17.6 | 200 | 82.2 | 183 | 20.3 | 192 |
| Harborough | 79.5 | 59 | 18.2 | 122 | 82.6 | 139 | 21.0 | 102 |
| High Peak | 78.4 | 160 | 17.8 | 177 | 81.5 | 262 | 20.2 | 208 |
| Hinckley and Bosworth | 79.5 | 58 | 18.3 | 91 | 82.0 | 208 | 19.9 | 268 |
| Kettering | 77.8 | 223 | 17.3 | 246 | 81.3 | 284 | 20.0 | 247 |
| Leicester | 75.3 | 389 | 16.1 | 388 | 79.9 | 394 | 18.7 | 395 |
| Lincoln | 76.6 | 312 | 17.1 | 277 | 80.4 | 361 | 19.5 | 315 |
| Mansfield | 75.6 | 379 | 16.3 | 375 | 80.4 | 359 | 19.4 | 323 |
| Melton | 79.3 | 83 | 17.9 | 155 | 82.4 | 162 | 20.9 | 109 |
| Newark and Sherwood | 77.8 | 224 | 17.3 | 248 | 81.1 | 300 | 19.9 | 265 |
| North East Derbyshire | 78.0 | 198 | 17.2 | 263 | 81.0 | 313 | 19.5 | 318 |
| North Kesteven | 79.3 | 84 | 18.0 | 152 | 83.0 | 93 | 20.7 | 132 |
| North West Leicestershire | 77.8 | 222 | 17.2 | 264 | 81.3 | 285 | 19.6 | 308 |
| Northampton | 77.2 | 261 | 17.3 | 245 | 81.5 | 264 | 20.1 | 232 |
| Nottingham | 74.6 | 411 | 15.8 | 411 | 80.1 | 383 | 19.4 | 328 |
| Oadby and Wigston | 79.2 | 90 | 18.4 | 85 | 82.2 | 182 | 20.3 | 205 |
| Rushcliffe | 79.7 | 49 | 18.3 | 95 | 83.6 | 41 | 20.9 | 106 |
| Rutland | 80.1 | 25 | 19.4 | 9 | 84.7 | 3 | 22.7 | 3 |
| South Derbyshire | 77.9 | 213 | 17.2 | 270 | 82.0 | 206 | 19.9 | 257 |
| South Holland | 78.1 | 192 | 17.9 | 164 | 81.7 | 239 | 20.8 | 128 |
| South Kesteven | 77.9 | 216 | 17.9 | 166 | 82.2 | 189 | 20.2 | 212 |
| South Northamptonshire | 80.1 | 24 | 18.4 | 86 | 83.2 | 71 | 21.1 | 72 |
| Wellingborough | 77.8 | 226 | 17.3 | 249 | 82.6 | 143 | 20.6 | 150 |
| West Lindsey | 78.5 | 153 | 17.7 | 191 | 80.8 | 327 | 20.0 | 238 |
| **West Midlands** | 76.9 | | 17.1 | | 81.4 | | 19.9 | |
| Birmingham | 75.6 | 378 | 16.6 | 349 | 80.8 | 333 | 19.7 | 285 |
| Bridgnorth | 78.4 | 157 | 17.3 | 251 | 83.2 | 74 | 20.7 | 141 |
| Bromsgrove | 79.1 | 99 | 17.6 | 204 | 81.7 | 244 | 19.9 | 266 |
| Cannock Chase | 76.3 | 332 | 16.0 | 398 | 80.3 | 373 | 18.9 | 382 |
| Coventry | 76.2 | 342 | 16.9 | 308 | 80.9 | 320 | 20.1 | 233 |
| Dudley | 77.0 | 272 | 16.9 | 316 | 81.6 | 253 | 19.9 | 261 |
| East Staffordshire | 76.9 | 290 | 16.8 | 332 | 80.8 | 329 | 19.7 | 296 |
| Herefordshire, County of | 78.1 | 185 | 17.8 | 175 | 83.0 | 91 | 21.0 | 87 |
| Lichfield | 78.4 | 161 | 17.7 | 198 | 81.6 | 250 | 19.5 | 321 |
| Malvern Hills | 78.6 | 140 | 18.1 | 126 | 82.4 | 161 | 20.6 | 161 |
| Newcastle-under-Lyme | 76.6 | 309 | 16.7 | 337 | 81.5 | 258 | 19.9 | 264 |
| North Shropshire | 78.0 | 204 | 17.7 | 193 | 82.2 | 178 | 20.3 | 199 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

**Table 5 continued** **Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07**

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| North Warwickshire | 77.4 | 251 | 16.7 | 340 | 81.3 | 283 | 19.1 | 367 |
| Nuneaton and Bedworth | 76.5 | 317 | 16.4 | 360 | 80.4 | 363 | 18.8 | 388 |
| Oswestry | 78.1 | 188 | 17.7 | 194 | 82.6 | 153 | 20.3 | 198 |
| Redditch | 77.3 | 257 | 17.0 | 298 | 80.6 | 350 | 20.1 | 228 |
| Rugby | 78.0 | 205 | 17.7 | 183 | 81.4 | 272 | 20.0 | 254 |
| Sandwell | 74.2 | 417 | 15.8 | 414 | 80.0 | 389 | 18.8 | 389 |
| Shrewsbury and Atcham | 77.8 | 221 | 18.3 | 98 | 82.9 | 106 | 21.2 | 62 |
| Solihull | 78.4 | 164 | 17.9 | 156 | 83.8 | 31 | 21.8 | 21 |
| South Shropshire | 80.1 | 20 | 19.7 | 4 | 82.7 | 130 | 21.0 | 98 |
| South Staffordshire | 78.2 | 183 | 17.3 | 260 | 81.8 | 231 | 19.6 | 309 |
| Stafford | 78.0 | 203 | 17.5 | 218 | 81.9 | 215 | 20.0 | 237 |
| Staffordshire Moorlands | 78.0 | 200 | 17.4 | 238 | 81.8 | 228 | 19.9 | 273 |
| Stoke-on-Trent | 75.0 | 404 | 15.8 | 417 | 80.0 | 391 | 19.2 | 361 |
| Stratford-on-Avon | 79.0 | 108 | 17.8 | 171 | 82.1 | 198 | 20.2 | 224 |
| Tamworth | 78.3 | 178 | 17.5 | 231 | 80.7 | 337 | 19.5 | 319 |
| Telford and Wrekin | 76.9 | 284 | 16.8 | 325 | 81.4 | 267 | 20.2 | 211 |
| Walsall | 75.7 | 369 | 16.8 | 331 | 81.3 | 282 | 19.9 | 260 |
| Warwick | 79.1 | 102 | 18.8 | 35 | 83.1 | 77 | 21.1 | 78 |
| Wolverhampton | 75.7 | 374 | 16.8 | 333 | 80.3 | 369 | 19.4 | 335 |
| Worcester | 77.3 | 256 | 17.5 | 217 | 82.0 | 207 | 20.2 | 209 |
| Wychavon | 79.0 | 111 | 18.1 | 135 | 83.6 | 35 | 21.3 | 50 |
| Wyre Forest | 77.9 | 212 | 18.2 | 123 | 82.0 | 209 | 20.3 | 203 |
| **East of England** | 78.7 | | 18.0 | | 82.6 | | 20.6 | |
| Babergh | 79.4 | 73 | 18.2 | 102 | 83.5 | 46 | 21.0 | 90 |
| Basildon | 77.9 | 217 | 17.4 | 239 | 81.7 | 246 | 19.9 | 272 |
| Bedford | 78.4 | 170 | 18.1 | 133 | 82.0 | 212 | 20.1 | 234 |
| Braintree | 78.6 | 141 | 17.7 | 192 | 82.6 | 150 | 20.5 | 166 |
| Breckland | 79.1 | 104 | 17.9 | 160 | 82.6 | 138 | 20.5 | 167 |
| Brentwood | 80.3 | 15 | 18.6 | 49 | 83.6 | 40 | 21.3 | 52 |
| Broadland | 79.1 | 98 | 17.9 | 159 | 82.9 | 102 | 20.5 | 178 |
| Broxbourne | 79.6 | 53 | 18.6 | 50 | 82.5 | 154 | 20.6 | 154 |
| Cambridge | 78.0 | 206 | 17.5 | 214 | 82.6 | 141 | 20.5 | 176 |
| Castle Point | 79.7 | 42 | 18.1 | 129 | 82.2 | 188 | 20.2 | 213 |
| Chelmsford | 79.9 | 37 | 18.8 | 34 | 83.9 | 25 | 21.4 | 41 |
| Colchester | 78.4 | 167 | 17.6 | 211 | 83.1 | 79 | 21.0 | 100 |
| Dacorum | 79.2 | 93 | 18.2 | 107 | 82.9 | 103 | 20.8 | 117 |
| East Cambridgeshire | 80.1 | 23 | 18.4 | 76 | 84.0 | 19 | 21.5 | 31 |
| East Hertfordshire | 80.0 | 27 | 18.8 | 39 | 83.0 | 87 | 21.0 | 103 |
| Epping Forest | 78.3 | 175 | 17.5 | 228 | 82.2 | 187 | 20.0 | 248 |
| Fenland | 77.4 | 245 | 17.2 | 272 | 80.9 | 317 | 19.6 | 304 |
| Forest Heath | 79.1 | 103 | 18.4 | 89 | 83.5 | 45 | 21.1 | 76 |
| Great Yarmouth | 77.0 | 278 | 17.3 | 257 | 81.8 | 224 | 20.0 | 246 |
| Harlow | 77.7 | 229 | 18.0 | 151 | 82.7 | 133 | 21.1 | 71 |
| Hertsmere | 78.7 | 129 | 18.2 | 105 | 82.2 | 177 | 19.9 | 262 |
| Huntingdonshire | 78.8 | 124 | 18.2 | 120 | 82.6 | 136 | 20.4 | 185 |
| Ipswich | 77.9 | 211 | 17.8 | 178 | 82.7 | 134 | 20.5 | 172 |
| King's Lynn and West Norfolk | 78.4 | 171 | 18.1 | 124 | 82.1 | 199 | 20.7 | 138 |
| Luton | 76.5 | 315 | 17.0 | 304 | 80.3 | 372 | 19.0 | 374 |
| Maldon | 78.4 | 163 | 17.6 | 205 | 82.6 | 140 | 20.5 | 165 |
| Mid Bedfordshire | 78.8 | 121 | 17.8 | 176 | 82.6 | 137 | 20.4 | 179 |
| Mid Suffolk | 80.2 | 18 | 18.7 | 48 | 83.8 | 30 | 21.4 | 38 |
| North Hertfordshire | 78.5 | 151 | 17.5 | 225 | 82.7 | 135 | 20.4 | 180 |
| North Norfolk | 78.4 | 165 | 18.5 | 69 | 84.3 | 12 | 22.0 | 12 |
| Norwich | 77.2 | 263 | 18.0 | 137 | 83.1 | 82 | 21.8 | 22 |
| Peterborough | 76.4 | 326 | 17.0 | 307 | 80.5 | 354 | 19.3 | 338 |
| Rochford | 79.6 | 54 | 18.3 | 99 | 84.4 | 8 | 21.7 | 23 |
| South Bedfordshire | 78.1 | 195 | 17.5 | 230 | 81.5 | 254 | 19.7 | 286 |
| South Cambridgeshire | 80.4 | 14 | 18.9 | 30 | 84.4 | 9 | 21.8 | 19 |
| South Norfolk | 80.0 | 31 | 19.0 | 21 | 83.4 | 50 | 21.3 | 53 |
| Southend-on-Sea | 77.1 | 269 | 17.3 | 247 | 81.5 | 256 | 19.9 | 270 |
| St Albans | 80.0 | 32 | 18.2 | 119 | 83.3 | 65 | 21.0 | 83 |
| St Edmundsbury | 79.1 | 97 | 18.2 | 110 | 83.0 | 94 | 21.0 | 95 |
| Stevenage | 77.6 | 236 | 17.4 | 232 | 81.8 | 230 | 20.0 | 240 |
| Suffolk Coastal | 80.3 | 16 | 18.7 | 45 | 83.4 | 57 | 21.2 | 57 |
| Tendring | 77.7 | 231 | 17.8 | 179 | 81.8 | 229 | 20.5 | 174 |
| Three Rivers | 80.6 | 9 | 18.9 | 32 | 82.9 | 107 | 20.4 | 183 |
| Thurrock | 77.9 | 218 | 17.0 | 296 | 81.6 | 252 | 20.1 | 231 |
| Uttlesford | 79.4 | 67 | 18.0 | 143 | 83.1 | 80 | 20.7 | 139 |
| Watford | 77.5 | 244 | 17.0 | 297 | 81.1 | 306 | 19.4 | 334 |
| Waveney | 78.7 | 127 | 18.2 | 113 | 82.4 | 163 | 20.7 | 136 |
| Welwyn Hatfield | 78.8 | 122 | 18.1 | 131 | 82.8 | 113 | 20.8 | 115 |
| **London** | 77.9 | | 17.8 | | 82.4 | | 20.7 | |
| Barking and Dagenham | 76.3 | 329 | 16.4 | 368 | 80.3 | 371 | 19.2 | 356 |
| Barnet | 79.5 | 65 | 18.8 | 42 | 83.6 | 44 | 21.3 | 51 |
| Bexley | 78.7 | 125 | 18.1 | 130 | 82.7 | 120 | 20.9 | 112 |
| Brent | 78.5 | 149 | 19.0 | 22 | 83.8 | 32 | 22.3 | 6 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

**Table 5 continued** **Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07**

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| Bromley | 79.5 | 64 | 18.5 | 59 | 83.5 | 47 | 21.3 | 49 |
| Camden | 76.9 | 286 | 17.3 | 258 | 82.2 | 179 | 20.3 | 195 |
| Croydon | 78.3 | 176 | 18.5 | 60 | 82.0 | 210 | 20.4 | 182 |
| Ealing | 78.2 | 184 | 18.2 | 109 | 83.0 | 100 | 21.2 | 68 |
| Enfield | 78.5 | 148 | 18.2 | 112 | 82.4 | 166 | 20.7 | 142 |
| Greenwich | 74.9 | 405 | 15.9 | 406 | 81.4 | 274 | 20.2 | 218 |
| Hackney | 75.7 | 375 | 17.1 | 293 | 82.1 | 196 | 21.2 | 59 |
| Hammersmith and Fulham | 78.0 | 207 | 18.4 | 84 | 84.0 | 20 | 22.3 | 5 |
| Haringey | 76.1 | 345 | 17.1 | 286 | 82.8 | 114 | 21.3 | 44 |
| Harrow | 79.6 | 56 | 18.6 | 51 | 83.6 | 38 | 21.5 | 32 |
| Havering | 78.3 | 177 | 17.4 | 237 | 82.1 | 200 | 20.1 | 235 |
| Hillingdon | 78.0 | 208 | 17.5 | 216 | 82.7 | 127 | 21.1 | 79 |
| Hounslow | 76.9 | 285 | 17.1 | 285 | 81.2 | 294 | 19.5 | 320 |
| Islington | 75.1 | 397 | 16.4 | 367 | 80.8 | 325 | 19.3 | 339 |
| Kensington and Chelsea | 83.7 | 1 | 22.7 | 1 | 87.8 | 1 | 25.2 | 1 |
| Kingston upon Thames | 79.3 | 75 | 18.0 | 144 | 83.0 | 89 | 20.6 | 155 |
| Lambeth | 75.8 | 366 | 17.1 | 287 | 80.6 | 346 | 19.7 | 300 |
| Lewisham | 76.0 | 350 | 16.2 | 383 | 80.8 | 326 | 19.2 | 358 |
| Merton | 79.7 | 46 | 18.7 | 47 | 83.0 | 86 | 21.0 | 84 |
| Newham | 75.7 | 373 | 17.0 | 303 | 79.8 | 397 | 18.8 | 392 |
| Redbridge | 78.3 | 174 | 18.0 | 150 | 82.4 | 167 | 20.4 | 181 |
| Richmond upon Thames | 80.0 | 29 | 18.4 | 74 | 83.8 | 29 | 21.6 | 27 |
| Southwark | 77.0 | 276 | 18.0 | 136 | 82.0 | 201 | 21.2 | 63 |
| Sutton | 78.7 | 132 | 17.9 | 168 | 82.6 | 152 | 20.5 | 169 |
| Tower Hamlets | 75.3 | 392 | 16.3 | 371 | 80.4 | 362 | 18.9 | 379 |
| Waltham Forest | 75.9 | 359 | 16.3 | 369 | 81.0 | 311 | 19.5 | 316 |
| Wandsworth | 76.9 | 291 | 16.8 | 334 | 81.4 | 271 | 20.0 | 249 |
| Westminster | 81.5 | 2 | 21.2 | 2 | 84.6 | 5 | 22.6 | 4 |
| **South East** | 78.9 | | 18.2 | | 82.7 | | 20.7 | |
| Adur | 78.3 | 173 | 17.6 | 210 | 81.2 | 290 | 20.2 | 225 |
| Arun | 78.1 | 189 | 18.0 | 147 | 82.3 | 175 | 20.8 | 116 |
| Ashford | 79.7 | 45 | 19.2 | 11 | 82.2 | 181 | 20.7 | 147 |
| Aylesbury Vale | 79.3 | 81 | 18.2 | 116 | 82.0 | 202 | 20.0 | 243 |
| Basingstoke and Deane | 79.4 | 72 | 18.0 | 149 | 82.7 | 122 | 20.7 | 137 |
| Bracknell Forest | 78.9 | 115 | 17.5 | 220 | 83.0 | 90 | 21.2 | 69 |
| Brighton and Hove | 76.5 | 319 | 17.3 | 252 | 81.8 | 235 | 20.6 | 156 |
| Canterbury | 78.6 | 143 | 18.0 | 140 | 81.9 | 220 | 20.1 | 226 |
| Cherwell | 78.8 | 117 | 18.2 | 103 | 83.3 | 61 | 21.6 | 30 |
| Chichester | 79.1 | 105 | 18.4 | 80 | 82.6 | 148 | 20.9 | 113 |
| Chiltern | 79.5 | 61 | 18.8 | 33 | 84.4 | 7 | 21.9 | 16 |
| Crawley | 79.9 | 33 | 20.3 | 3 | 83.0 | 98 | 21.1 | 80 |
| Dartford | 78.1 | 187 | 17.3 | 250 | 81.6 | 247 | 19.1 | 363 |
| Dover | 77.4 | 246 | 17.6 | 202 | 81.6 | 249 | 20.2 | 216 |
| East Hampshire | 79.2 | 88 | 18.3 | 90 | 82.3 | 174 | 20.5 | 162 |
| Eastbourne | 77.9 | 219 | 18.4 | 72 | 82.1 | 194 | 20.8 | 123 |
| Eastleigh | 79.7 | 50 | 18.2 | 117 | 83.0 | 96 | 20.5 | 164 |
| Elmbridge | 81.1 | 4 | 19.2 | 13 | 83.2 | 68 | 21.1 | 77 |
| Epsom and Ewell | 79.9 | 38 | 18.6 | 54 | 84.4 | 10 | 21.6 | 26 |
| Fareham | 80.9 | 6 | 19.1 | 19 | 83.9 | 24 | 21.3 | 45 |
| Gosport | 77.3 | 253 | 17.1 | 281 | 81.2 | 292 | 20.0 | 241 |
| Gravesham | 78.6 | 144 | 17.7 | 184 | 81.9 | 219 | 20.0 | 239 |
| Guildford | 80.2 | 17 | 19.4 | 8 | 84.4 | 11 | 21.9 | 17 |
| Hart | 81.0 | 5 | 19.1 | 18 | 84.7 | 4 | 22.0 | 13 |
| Hastings | 75.9 | 358 | 16.9 | 312 | 80.3 | 368 | 19.7 | 291 |
| Havant | 78.8 | 118 | 18.5 | 63 | 82.7 | 121 | 20.7 | 134 |
| Horsham | 80.1 | 22 | 19.0 | 26 | 83.4 | 58 | 21.5 | 35 |
| Isle of Wight | 78.8 | 120 | 18.3 | 101 | 83.1 | 81 | 21.2 | 58 |
| Lewes | 79.9 | 36 | 19.5 | 6 | 84.1 | 14 | 22.2 | 7 |
| Maidstone | 78.1 | 191 | 17.7 | 197 | 82.2 | 184 | 20.0 | 245 |
| Medway | 76.6 | 310 | 16.6 | 353 | 81.0 | 310 | 19.4 | 332 |
| Mid Sussex | 79.9 | 39 | 18.3 | 93 | 82.6 | 147 | 20.4 | 188 |
| Milton Keynes | 78.0 | 202 | 17.4 | 235 | 81.5 | 263 | 19.6 | 303 |
| Mole Valley | 79.8 | 41 | 18.8 | 38 | 83.9 | 23 | 21.0 | 94 |
| New Forest | 80.4 | 12 | 19.2 | 15 | 84.1 | 15 | 22.1 | 11 |
| Oxford | 78.1 | 190 | 18.2 | 115 | 82.5 | 160 | 20.8 | 126 |
| Portsmouth | 76.7 | 306 | 17.1 | 294 | 81.9 | 216 | 20.5 | 175 |
| Reading | 77.6 | 235 | 17.7 | 187 | 81.9 | 218 | 20.6 | 159 |
| Reigate and Banstead | 78.7 | 128 | 17.5 | 219 | 82.5 | 156 | 20.3 | 194 |
| Rother | 79.0 | 112 | 18.3 | 96 | 82.8 | 112 | 21.2 | 64 |
| Runnymede | 79.1 | 106 | 18.4 | 79 | 83.0 | 85 | 21.1 | 70 |
| Rushmoor | 79.3 | 85 | 17.9 | 158 | 82.6 | 149 | 20.6 | 160 |
| Sevenoaks | 80.7 | 8 | 19.0 | 27 | 83.8 | 27 | 21.5 | 36 |
| Shepway | 77.6 | 233 | 17.9 | 153 | 81.5 | 260 | 20.0 | 244 |
| Slough | 77.9 | 215 | 18.5 | 58 | 82.3 | 171 | 20.5 | 173 |
| South Bucks | 80.5 | 11 | 19.0 | 23 | 83.0 | 88 | 20.9 | 114 |
| South Oxfordshire | 79.2 | 91 | 18.2 | 108 | 83.1 | 84 | 21.0 | 101 |
| Southampton | 77.1 | 267 | 17.6 | 212 | 82.0 | 204 | 20.6 | 157 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

**Table 5 continued** **Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07**

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| Spelthorne | 79.0 | 109 | 17.8 | 174 | 82.6 | 144 | 20.8 | 125 |
| Surrey Heath | 80.0 | 28 | 18.6 | 55 | 83.0 | 99 | 20.5 | 171 |
| Swale | 77.1 | 266 | 17.1 | 292 | 81.0 | 316 | 19.6 | 310 |
| Tandridge | 79.9 | 34 | 19.3 | 10 | 83.4 | 56 | 20.7 | 133 |
| Test Valley | 79.0 | 110 | 17.5 | 223 | 83.2 | 72 | 21.0 | 89 |
| Thanet | 76.3 | 333 | 16.8 | 321 | 80.9 | 324 | 19.5 | 317 |
| Tonbridge and Malling | 79.5 | 60 | 18.2 | 111 | 83.4 | 54 | 20.9 | 107 |
| Tunbridge Wells | 79.2 | 89 | 18.6 | 53 | 82.8 | 111 | 20.8 | 120 |
| Vale of White Horse | 79.8 | 40 | 18.5 | 57 | 83.7 | 33 | 21.0 | 91 |
| Waverley | 80.2 | 19 | 19.0 | 25 | 83.6 | 36 | 21.2 | 60 |
| Wealden | 80.4 | 13 | 18.9 | 28 | 83.8 | 28 | 21.4 | 37 |
| West Berkshire | 79.3 | 80 | 18.5 | 71 | 82.9 | 101 | 21.1 | 73 |
| West Oxfordshire | 79.6 | 52 | 18.1 | 127 | 83.4 | 55 | 21.0 | 88 |
| Winchester | 80.0 | 30 | 18.8 | 37 | 83.4 | 52 | 21.3 | 56 |
| Windsor and Maidenhead | 79.1 | 96 | 18.1 | 132 | 82.8 | 118 | 20.3 | 197 |
| Woking | 79.1 | 95 | 18.4 | 87 | 83.0 | 97 | 20.9 | 105 |
| Wokingham | 80.8 | 7 | 19.2 | 12 | 83.6 | 42 | 21.0 | 93 |
| Worthing | 78.1 | 196 | 17.6 | 207 | 81.2 | 295 | 19.9 | 256 |
| Wycombe | 79.5 | 62 | 18.7 | 44 | 83.6 | 43 | 21.8 | 18 |
| **South West** | 78.7 | | 18.2 | | 82.9 | | 21.0 | |
| Bath and North East Somerset | 79.7 | 48 | 18.5 | 65 | 83.2 | 75 | 21.1 | 75 |
| Bournemouth | 77.9 | 210 | 18.4 | 83 | 82.1 | 193 | 20.7 | 143 |
| Bristol, City of | 77.0 | 282 | 17.1 | 289 | 81.4 | 268 | 19.9 | 258 |
| Caradon | 78.4 | 158 | 17.7 | 186 | 82.8 | 109 | 20.7 | 135 |
| Carrick | 78.5 | 154 | 18.0 | 142 | 83.2 | 70 | 21.6 | 28 |
| Cheltenham | 79.1 | 100 | 18.4 | 81 | 82.9 | 105 | 21.0 | 86 |
| Christchurch | 80.1 | 21 | 19.7 | 5 | 84.5 | 6 | 22.2 | 8 |
| Cotswold | 80.6 | 10 | 19.1 | 20 | 83.3 | 62 | 21.2 | 61 |
| East Devon | 79.5 | 63 | 18.8 | 41 | 83.4 | 49 | 21.5 | 34 |
| East Dorset | 81.3 | 3 | 19.4 | 7 | 85.0 | 2 | 22.7 | 2 |
| Exeter | 78.1 | 186 | 17.5 | 213 | 83.2 | 76 | 21.4 | 40 |
| Forest of Dean | 77.4 | 249 | 17.7 | 188 | 82.4 | 165 | 21.0 | 96 |
| Gloucester | 77.9 | 214 | 17.8 | 181 | 81.8 | 226 | 19.8 | 281 |
| Kennet | 79.3 | 76 | 17.7 | 189 | 82.7 | 124 | 20.8 | 131 |
| Kerrier | 77.6 | 237 | 17.4 | 234 | 82.4 | 164 | 20.7 | 146 |
| Mendip | 78.6 | 146 | 18.6 | 56 | 82.7 | 128 | 20.8 | 127 |
| Mid Devon | 79.7 | 47 | 18.9 | 29 | 83.3 | 66 | 21.3 | 55 |
| North Cornwall | 78.7 | 131 | 18.4 | 88 | 82.6 | 145 | 20.7 | 144 |
| North Devon | 78.2 | 180 | 18.3 | 94 | 82.7 | 126 | 20.7 | 145 |
| North Dorset | 79.9 | 35 | 19.0 | 24 | 84.0 | 17 | 21.9 | 15 |
| North Somerset | 79.3 | 77 | 18.5 | 70 | 82.9 | 108 | 20.8 | 129 |
| North Wiltshire | 79.1 | 101 | 18.0 | 141 | 82.7 | 129 | 20.8 | 130 |
| Penwith | 78.4 | 169 | 17.9 | 157 | 82.2 | 190 | 20.5 | 163 |
| Plymouth | 76.8 | 298 | 17.1 | 280 | 81.9 | 217 | 20.3 | 193 |
| Poole | 78.9 | 114 | 18.4 | 82 | 83.3 | 60 | 21.3 | 48 |
| Purbeck | 79.6 | 57 | 18.8 | 40 | 84.1 | 16 | 22.2 | 9 |
| Restormel | 78.6 | 145 | 18.2 | 121 | 82.6 | 151 | 20.6 | 158 |
| Salisbury | 79.3 | 82 | 18.5 | 67 | 83.0 | 95 | 21.1 | 74 |
| Sedgemoor | 78.7 | 130 | 18.2 | 114 | 82.9 | 104 | 20.8 | 119 |
| South Gloucestershire | 79.4 | 69 | 18.1 | 128 | 83.6 | 37 | 21.2 | 65 |
| South Hams | 79.0 | 107 | 18.4 | 73 | 83.3 | 63 | 21.3 | 54 |
| South Somerset | 79.5 | 66 | 18.5 | 62 | 83.2 | 67 | 21.2 | 67 |
| Stroud | 78.3 | 172 | 17.7 | 195 | 82.7 | 123 | 20.8 | 121 |
| Swindon | 77.5 | 238 | 16.8 | 323 | 81.5 | 265 | 19.5 | 313 |
| Taunton Deane | 78.4 | 156 | 18.0 | 148 | 82.8 | 110 | 20.8 | 122 |
| Teignbridge | 79.7 | 43 | 18.5 | 64 | 84.0 | 21 | 21.9 | 14 |
| Tewkesbury | 79.3 | 79 | 18.5 | 61 | 83.1 | 78 | 21.1 | 82 |
| Torbay | 77.3 | 252 | 17.9 | 169 | 82.3 | 172 | 21.0 | 92 |
| Torridge | 78.4 | 162 | 18.3 | 92 | 83.3 | 59 | 21.2 | 66 |
| West Devon | 79.3 | 74 | 18.2 | 104 | 84.2 | 13 | 21.8 | 20 |
| West Dorset | 79.4 | 68 | 18.8 | 43 | 83.5 | 48 | 21.4 | 39 |
| West Somerset | 79.3 | 86 | 19.2 | 16 | 84.0 | 22 | 22.1 | 10 |
| West Wiltshire | 79.4 | 71 | 18.5 | 68 | 83.9 | 26 | 21.5 | 33 |
| Weymouth and Portland | 78.5 | 152 | 18.4 | 78 | 81.9 | 223 | 20.9 | 111 |
| **Wales** | 76.8 | | 17.0 | | 81.2 | | 19.8 | |
| **Local areas within Wales** | | | | | | | | |
| Blaenau Gwent | 75.2 | 393 | 16.0 | 394 | 78.7 | 425 | 18.2 | 420 |
| Bridgend | 75.9 | 362 | 16.2 | 379 | 80.2 | 381 | 19.1 | 370 |
| Caerphilly | 75.8 | 365 | 16.3 | 370 | 80.3 | 367 | 19.0 | 372 |
| Cardiff | 76.5 | 316 | 16.8 | 322 | 81.5 | 259 | 20.2 | 217 |
| Carmarthenshire | 76.2 | 339 | 16.6 | 346 | 81.4 | 275 | 19.7 | 297 |
| Ceredigion | 79.7 | 44 | 19.2 | 17 | 84.0 | 18 | 21.7 | 24 |
| Conwy | 76.8 | 294 | 17.5 | 215 | 81.2 | 297 | 20.3 | 196 |
| Denbighshire | 77.3 | 255 | 17.3 | 255 | 81.3 | 280 | 20.2 | 210 |
| Flintshire | 77.5 | 242 | 17.5 | 227 | 81.4 | 270 | 19.3 | 343 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

**Table 5 continued**

## Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

United Kingdom

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | Life expectancy at birth | | Life expectancy at age 65 | | Life expectancy at birth | | Life expectancy at age 65 | |
| | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] | Years | Rank order[2] |
| Gwynedd | 77.0 | 275 | 17.5 | 222 | 81.9 | 213 | 20.4 | 190 |
| Isle of Anglesey | 76.9 | 289 | 17.4 | 233 | 82.1 | 195 | 20.1 | 229 |
| Merthyr Tydfil | 75.5 | 380 | 16.1 | 385 | 79.4 | 410 | 18.6 | 399 |
| Monmouthshire | 78.6 | 134 | 18.1 | 134 | 83.7 | 34 | 21.6 | 29 |
| Neath Port Talbot | 76.4 | 324 | 16.7 | 338 | 80.6 | 344 | 19.4 | 330 |
| Newport | 77.1 | 270 | 17.1 | 283 | 80.9 | 323 | 19.8 | 275 |
| Pembrokeshire | 76.7 | 307 | 17.3 | 244 | 81.7 | 240 | 19.7 | 287 |
| Powys | 78.6 | 142 | 18.0 | 146 | 82.2 | 186 | 20.8 | 118 |
| Rhondda, Cynon, Taff | 75.0 | 402 | 15.9 | 402 | 80.0 | 387 | 18.8 | 391 |
| Swansea | 76.4 | 321 | 17.3 | 256 | 81.0 | 312 | 19.7 | 289 |
| The Vale of Glamorgan | 77.7 | 227 | 17.6 | 209 | 81.7 | 241 | 19.8 | 282 |
| Torfaen | 77.2 | 259 | 17.3 | 262 | 81.1 | 304 | 19.7 | 288 |
| Wrexham | 77.2 | 262 | 17.0 | 305 | 80.7 | 336 | 19.3 | 336 |
| **Scotland** | 74.8 | | 16.1 | | 79.7 | | 18.8 | |
| **Local areas within Scotland** | | | | | | | | |
| Aberdeen City | 75.2 | 394 | 16.2 | 381 | 80.2 | 378 | 19.0 | 373 |
| Aberdeenshire | 77.5 | 243 | 17.6 | 203 | 81.3 | 286 | 19.6 | 305 |
| Angus | 76.0 | 355 | 16.8 | 320 | 80.5 | 357 | 19.2 | 351 |
| Argyll & Bute | 76.2 | 341 | 17.0 | 295 | 80.1 | 385 | 19.4 | 327 |
| City of Edinburgh | 76.2 | 343 | 16.9 | 317 | 81.0 | 308 | 19.9 | 255 |
| Clackmannanshire | 74.1 | 419 | 15.5 | 422 | 79.4 | 409 | 18.6 | 401 |
| Dumfries & Galloway | 76.2 | 340 | 16.9 | 319 | 80.3 | 376 | 18.9 | 384 |
| Dundee City | 73.8 | 422 | 16.6 | 351 | 79.4 | 411 | 19.4 | 333 |
| East Ayrshire | 74.0 | 420 | 15.5 | 425 | 77.9 | 431 | 17.8 | 429 |
| East Dunbartonshire | 78.0 | 201 | 17.3 | 243 | 82.5 | 158 | 20.3 | 200 |
| East Lothian | 76.2 | 344 | 16.3 | 374 | 81.0 | 309 | 19.4 | 331 |
| East Renfrewshire | 77.4 | 250 | 17.2 | 267 | 82.5 | 157 | 20.4 | 186 |
| Eilean Siar | 72.9 | 428 | 15.6 | 420 | 80.2 | 382 | 19.7 | 293 |
| Falkirk | 74.9 | 408 | 15.9 | 409 | 79.5 | 408 | 18.1 | 422 |
| Fife | 75.8 | 364 | 16.6 | 344 | 80.4 | 366 | 19.3 | 342 |
| Glasgow City | 70.8 | 432 | 13.8 | 432 | 77.1 | 432 | 17.4 | 432 |
| Highland | 75.8 | 363 | 16.7 | 339 | 80.6 | 348 | 19.5 | 322 |
| Inverclyde | 72.5 | 430 | 15.1 | 429 | 78.2 | 428 | 18.3 | 417 |
| Midlothian | 76.0 | 354 | 16.4 | 364 | 79.7 | 398 | 18.2 | 419 |
| Moray | 75.9 | 361 | 16.4 | 365 | 80.2 | 380 | 18.9 | 383 |
| North Ayrshire | 73.7 | 423 | 15.4 | 427 | 79.0 | 418 | 18.5 | 408 |
| North Lanarkshire | 72.7 | 429 | 14.9 | 431 | 78.4 | 427 | 17.8 | 427 |
| Orkney Islands | 74.9 | 406 | 16.2 | 382 | 81.5 | 261 | 19.6 | 311 |
| Perth & Kinross | 76.9 | 293 | 17.5 | 226 | 81.2 | 289 | 19.8 | 283 |
| Renfrewshire | 73.7 | 424 | 15.2 | 428 | 78.8 | 423 | 17.8 | 428 |
| Scottish Borders | 76.6 | 311 | 16.7 | 342 | 80.7 | 334 | 19.2 | 360 |
| Shetland Islands | 76.1 | 347 | 18.4 | 75 | 82.6 | 142 | 21.0 | 99 |
| South Ayrshire | 75.7 | 372 | 16.8 | 328 | 80.6 | 342 | 19.3 | 347 |
| South Lanarkshire | 74.4 | 416 | 15.6 | 421 | 79.5 | 407 | 18.4 | 413 |
| Stirling | 76.8 | 295 | 16.5 | 357 | 81.0 | 315 | 19.1 | 369 |
| West Dunbartonshire | 71.9 | 431 | 15.0 | 430 | 77.9 | 430 | 17.6 | 431 |
| West Lothian | 75.4 | 385 | 16.0 | 391 | 79.0 | 421 | 17.7 | 430 |
| **Northern Ireland** | 76.2 | | 16.9 | | 81.3 | | 19.8 | |
| **Local areas within Northern Ireland** | | | | | | | | |
| Antrim | 76.8 | 297 | 17.2 | 265 | 80.5 | 355 | 19.4 | 324 |
| Ards | 77.0 | 281 | 17.1 | 282 | 81.7 | 237 | 19.7 | 292 |
| Armagh | 76.3 | 334 | 17.2 | 268 | 81.8 | 232 | 19.5 | 314 |
| Ballymena | 77.8 | 225 | 17.7 | 185 | 82.6 | 146 | 20.1 | 227 |
| Ballymoney | 77.2 | 264 | 17.1 | 276 | 82.5 | 155 | 21.4 | 42 |
| Banbridge | 78.5 | 150 | 18.6 | 52 | 83.2 | 69 | 20.7 | 149 |
| Belfast | 73.6 | 425 | 15.6 | 419 | 79.6 | 401 | 19.1 | 365 |
| Carrickfergus | 76.4 | 325 | 16.5 | 359 | 80.4 | 360 | 18.8 | 390 |
| Castlereagh | 78.1 | 194 | 17.1 | 288 | 82.3 | 176 | 20.2 | 206 |
| Coleraine | 78.4 | 166 | 17.9 | 163 | 82.3 | 170 | 20.8 | 124 |
| Cookstown | 75.0 | 401 | 16.3 | 373 | 81.7 | 243 | 19.7 | 290 |
| Craigavon | 77.3 | 258 | 17.6 | 199 | 82.4 | 169 | 20.6 | 151 |
| Derry | 74.5 | 414 | 15.9 | 403 | 79.7 | 399 | 18.7 | 394 |
| Down | 77.6 | 234 | 17.8 | 180 | 80.9 | 321 | 19.8 | 276 |
| Dungannon | 74.5 | 413 | 16.4 | 366 | 81.4 | 273 | 20.3 | 201 |
| Fermanagh | 75.0 | 400 | 16.9 | 314 | 81.5 | 255 | 19.9 | 269 |
| Larne | 77.0 | 279 | 16.8 | 327 | 81.2 | 296 | 19.1 | 368 |
| Limavady | 76.8 | 300 | 17.0 | 302 | 81.0 | 307 | 19.1 | 364 |
| Lisburn | 77.0 | 283 | 17.4 | 242 | 81.7 | 236 | 19.8 | 278 |
| Magherafelt | 77.1 | 271 | 17.4 | 240 | 81.8 | 233 | 20.5 | 177 |
| Moyle | 77.6 | 232 | 18.1 | 125 | 82.1 | 192 | 20.4 | 189 |
| Newry and Mourne | 76.0 | 351 | 16.4 | 363 | 80.3 | 370 | 19.3 | 341 |
| Newtownabbey | 77.9 | 220 | 17.4 | 236 | 81.7 | 238 | 19.8 | 274 |
| North Down | 78.0 | 197 | 17.7 | 196 | 82.8 | 116 | 21.3 | 46 |
| Omagh | 75.4 | 382 | 16.9 | 315 | 81.5 | 257 | 20.5 | 170 |
| Strabane | 76.3 | 336 | 16.9 | 309 | 81.1 | 301 | 19.2 | 362 |

1 The 95 per cent confidence intervals for these results are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.1= Highest, 432 = Lowest.

# Report:

# Cancer incidence and mortality in the United Kingdom and constituent countries, 2003–05

**Susan Westlake**
*Office for National Statistics*

## Introduction

This report summarises information on cancer cases and deaths in the UK during 2003–05. UK data for 2002–04 were published in *Health Statistics Quarterly* 35[1] and on the Office for National Statistics website.[2] Additionally, ONS has analysed trends in UK incidence and mortality 1993–2004.[3]

This report presents the numbers of newly diagnosed cases of cancer (incidence) and deaths from cancer (mortality), together with the age-standardised incidence and mortality rates (see Technical note 1). The report covers all cancers combined (excluding the incidence of non-melanoma skin cancer – see Technical note 2), and 21 common cancers. Results are given for the UK as a whole and for its four constituent countries (see Technical note 3). Numbers and age-standardised rates have been calculated as averages over the three-year period 2003–05 (see Technical note 4).

The major cancers included in the tables and figures presented here accounted for almost 90 per cent of all cases of cancer, and just over 80 per cent of all deaths from cancer, in the UK in 2003–05. The three most common cancers accounted for around 50 per cent of both cases and deaths from cancer.

## Key findings

- Around 144,000 males and 144,000 females were newly-diagnosed with cancer on average each year in the UK during 2003–05, corresponding to an incidence rate of 411 and 350 per 100,000 respectively
- Around 80,000 males and 74,000 females died from cancer on average each year in the UK, corresponding to a mortality rate of 222 and 156 per 100,000 respectively
- In females, breast cancer had the highest incidence rate in the UK (121 per 100,000), 26 per cent higher than the cancer with the highest incidence in males – prostate cancer (97 per 100,000)
- Wales had the highest overall cancer incidence rate for males, which was 11 per cent higher than the UK average; the mortality rate was 3 per cent higher. In Scotland, the overall cancer incidence rates for males and females were around 10 per cent higher, and the mortality rates were around 16 per cent higher, than the UK average
- In England and Northern Ireland, overall cancer incidence and mortality rates were similar to those for the UK as a whole

## Incidence

In the UK, there were on average around 288,000 newly diagnosed cases of cancer each year in 2003–05, with around 144,000 cases among males and 144,000 among females. Although there were almost identical numbers of cases among males and females, the overall age-standardised incidence rate was higher among males – 411 per 100,000 compared with 351 per 100,000 for females (Table 1).

The three most common cancers were prostate, lung and colorectal for males, and breast, lung and colorectal for females (Figure 1). The incidence of lung cancer was 75 per cent higher in males than in females (63 and 36 per 100,000 respectively), and the incidence of colorectal cancer was around 60 per cent higher in males (55 and 34 per 100,000 for males and females, respectively). Overall, breast cancer in females had the highest incidence rate (121 per 100,000), 26 per cent higher than the cancer with the highest incidence in males – prostate cancer (97 per 100,000).

## Mortality

There were on average 154,000 deaths from cancer each year in the UK in 2003–05, with around 80,000 deaths among males and 74,000 among females. The equivalent age-standardised mortality rates were 222 and 156 per 100,000 among males and females, respectively (Table 2).

The three most common cancers for both sexes were also the most common causes of death from cancer (Figure 2). However, for females the mortality rate was lower for breast than for lung cancer (28 and 30 per 100,000 respectively). For males, the mortality rate for lung cancer

**Table 1** Newly diagnosed cases of cancer and directly age-standardised[1] incidence rates per 100,000 population: selected sites by sex and country, 2003–05[2]

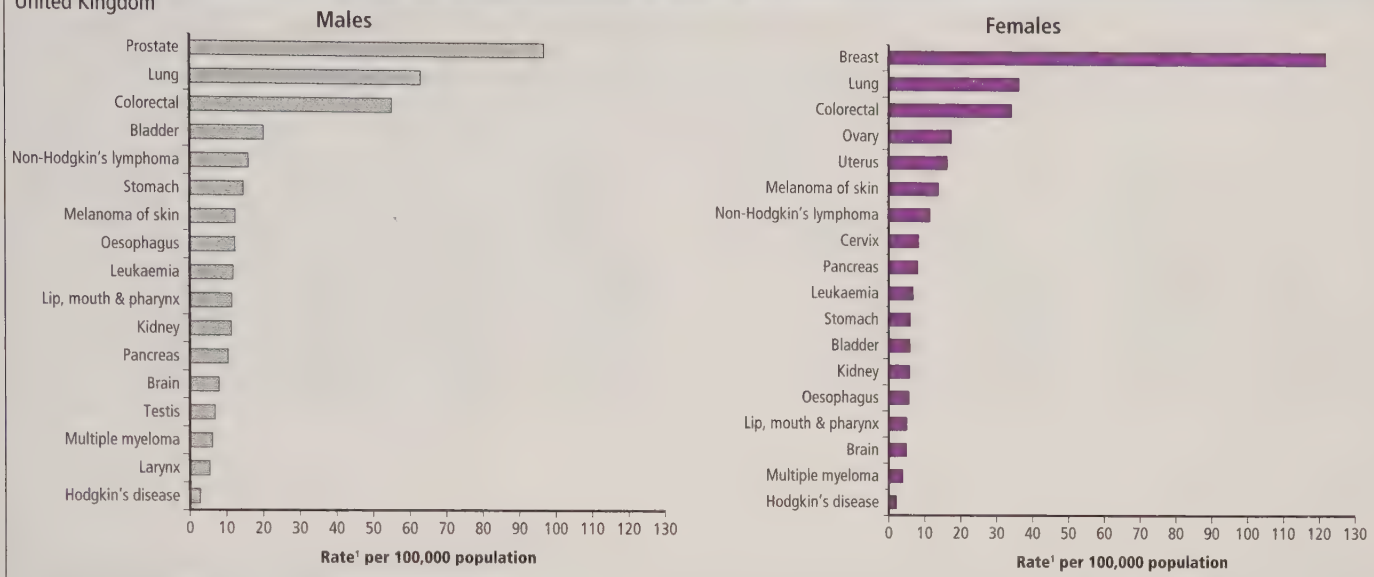
United Kingdom

| ICD–10 | Site description | Sex | United Kingdom | | England | | Wales | | Scotland | | N Ireland | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Number | Rate | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| **C00–C97** | **All malignancies[3]** | **M** | **143,894** | **411.4** | **118,741** | **404.2** | **8,574** | **457.7** | **13,084** | **448.4** | **3,495** | **408.8** |
| | | **F** | **143,851** | **350.5** | **118,349** | **348.9** | **8,035** | **372.8** | **13,869** | **384.3** | **3,598** | **349.0** |
| C00–C14 | Lip, mouth & pharynx | M | 3,653 | 11.4 | 2,890 | 10.8 | 207 | 12.4 | 462 | 16.7 | 93 | 11.3 |
| | | F | 1,956 | 5.0 | 1,574 | 4.9 | 99 | 5.0 | 231 | 6.7 | 52 | 5.2 |
| C15 | Oesophagus | M | 4,326 | 12.3 | 3,443 | 11.6 | 262 | 14.0 | 519 | 17.8 | 103 | 12.2 |
| | | F | 2,783 | 5.6 | 2,260 | 5.5 | 157 | 5.9 | 314 | 7.4 | 52 | 4.2 |
| C16 | Stomach | M | 5,256 | 14.6 | 4,289 | 14.1 | 333 | 17.4 | 494 | 16.6 | 140 | 16.1 |
| | | F | 3,020 | 6.0 | 2,401 | 5.7 | 203 | 7.4 | 329 | 7.6 | 87 | 7.2 |
| C18–C20 | Colorectal | M | 19,517 | 55.0 | 15,973 | 53.6 | 1,121 | 58.7 | 1,884 | 63.7 | 539 | 62.8 |
| | | F | 16,032 | 34.1 | 13,161 | 33.8 | 864 | 34.8 | 1,572 | 38.7 | 435 | 38.1 |
| C25 | Pancreas | M | 3,646 | 10.4 | 3,068 | 10.4 | 209 | 11.1 | 291 | 9.9 | 77 | 9.2 |
| | | F | 3,893 | 8.1 | 3,244 | 8.1 | 228 | 8.9 | 336 | 8.3 | 85 | 7.0 |
| C32 | Larynx | M | 1,798 | 5.4 | 1,426 | 5.1 | 91 | 5.1 | 229 | 8.1 | 52 | 6.2 |
| | | F | 396 | 1.0 | 297 | 0.9 | 21 | 1.0 | 64 | 1.9 | 14 | 1.5 |
| C34 | Lung | M | 22,509 | 62.9 | 18,150 | 60.4 | 1,276 | 66.3 | 2,521 | 84.4 | 562 | 65.0 |
| | | F | 16,120 | 36.1 | 12,748 | 34.5 | 895 | 38.7 | 2,102 | 54.0 | 376 | 34.6 |
| C43 | Melanoma of skin | M | 4,058 | 12.4 | 3,380 | 12.3 | 206 | 12.2 | 375 | 13.6 | 96 | 11.6 |
| | | F | 4,974 | 13.8 | 4,117 | 13.7 | 253 | 13.7 | 471 | 15.0 | 133 | 13.8 |
| C50 | Breast | F | 45,147 | 121.4 | 37,741 | 123.0 | 2,377 | 121.9 | 3,941 | 120.0 | 1,088 | 114.3 |
| C53 | Cervix | F | 2,813 | 8.3 | 2,286 | 8.0 | 167 | 10.1 | 280 | 9.6 | 79 | 8.7 |
| C54 | Uterus | F | 6,276 | 16.3 | 5,222 | 16.5 | 370 | 18.1 | 512 | 15.2 | 172 | 18.0 |
| C56 | Ovary | F | 6,768 | 17.4 | 5,558 | 17.3 | 396 | 19.3 | 621 | 18.2 | 193 | 19.6 |
| C61 | Prostate | M | 34,575 | 96.7 | 29,093 | 97.0 | 2,182 | 111.4 | 2,519 | 84.3 | 781 | 91.1 |
| C62 | Testis | M | 2,003 | 6.8 | 1,637 | 6.6 | 102 | 7.6 | 201 | 8.1 | 64 | 7.6 |
| C64 | Kidney | M | 3,828 | 11.3 | 3,139 | 11.1 | 237 | 13.2 | 359 | 12.6 | 93 | 11.0 |
| | | F | 2,390 | 5.8 | 1,934 | 5.7 | 151 | 7.1 | 237 | 6.4 | 68 | 6.7 |
| C67 | Bladder | M | 7,311 | 20.1 | 6,012 | 19.6 | 639 | 33.3 | 510 | 17.0 | 150 | 17.2 |
| | | F | 2,972 | 5.9 | 2,405 | 5.7 | 252 | 10.0 | 255 | 5.9 | 60 | 5.1 |
| C71 | Brain | M | 2,526 | 7.9 | 2,119 | 7.9 | 136 | 8.2 | 210 | 7.8 | 61 | 7.3 |
| | | F | 1,780 | 4.9 | 1,480 | 4.9 | 107 | 5.7 | 148 | 4.6 | 45 | 4.9 |
| C81–C96 | Lymphomas and Leukaemias | M | 12,745 | 37.7 | 10,548 | 37.2 | 756 | 42.3 | 1,131 | 40.2 | 310 | 36.4 |
| | | F | 10,465 | 25.1 | 8,610 | 25.0 | 614 | 27.5 | 970 | 26.8 | 271 | 25.5 |
| C81–C85 | Lymphomas | M | 6,246 | 18.8 | 5,213 | 18.7 | 327 | 19.0 | 548 | 19.7 | 158 | 18.7 |
| | | F | 5,421 | 13.5 | 4,484 | 13.5 | 281 | 13.5 | 499 | 14.2 | 156 | 14.8 |
| C81 | Hodgkin's disease | M | 848 | 2.8 | 701 | 2.7 | 43 | 2.9 | 78 | 3.1 | 25 | 2.9 |
| | | F | 653 | 2.1 | 545 | 2.1 | 31 | 2.0 | 60 | 2.1 | 18 | 2.0 |
| C82–C85 | Non-Hodgkin's lymphoma | M | 5,397 | 16.0 | 4,512 | 15.9 | 283 | 16.2 | 469 | 16.6 | 133 | 15.7 |
| | | F | 4,767 | 11.5 | 3,939 | 11.5 | 251 | 11.4 | 439 | 12.1 | 138 | 12.8 |
| C90 | Multiple myeloma | M | 2,142 | 6.1 | 1,763 | 6.0 | 135 | 7.1 | 175 | 6.0 | 68 | 7.9 |
| | | F | 1,815 | 3.9 | 1,481 | 3.9 | 120 | 4.8 | 167 | 4.0 | 47 | 4.2 |
| C91–C95 | Leukaemia | M | 4,034 | 11.8 | 3,287 | 11.4 | 279 | 15.3 | 387 | 13.8 | 82 | 9.7 |
| | | F | 2,840 | 6.8 | 2,281 | 6.5 | 202 | 8.8 | 290 | 8.2 | 66 | 6.3 |

1 Using the European standard population.
2 All numbers and rates in this table are calculated as three-year averages.
3 Figures exclude non-melanoma skin cancer (ICD–10 C44).

**Figure 1** Major cancers: age-standardised[1] incidence by sex, 2003–05[2]

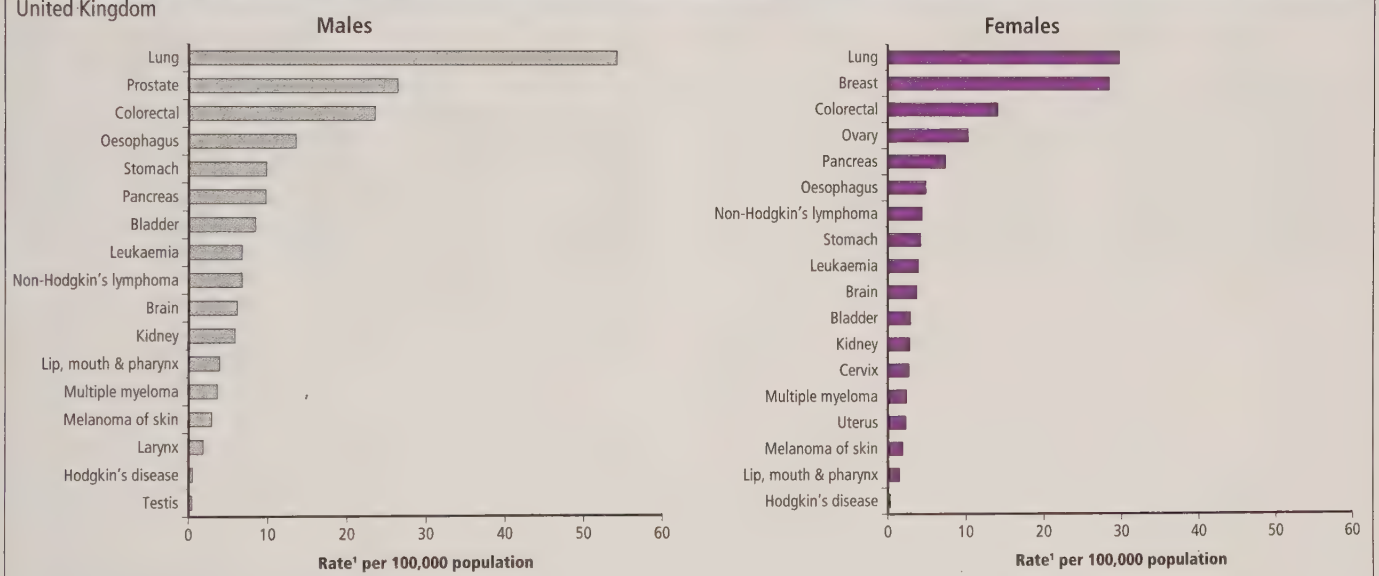
United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

**Figure 2** Major cancers: age-standardised[1] mortality by sex, 2003–05[2]

United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

(54 per 100,000) was twice as high as that for prostate cancer (26 per 100,000). Overall, the highest mortality rate was for lung cancer in males. The mortality rate for lung cancer was 83 per cent higher in males than in females. The mortality rate for colorectal cancer was 66 per cent higher in males than females (24 and 14 per 100,000 for males and females respectively).

## Variations between countries

Lung cancer incidence and mortality rates for both sexes were much higher in Scotland than in the rest of the UK (Figure 3). Rates in Wales, Northern Ireland and England were fairly similar. For colorectal cancer, the variation in incidence rates between the countries was similar to that in mortality rates, with Scotland generally having the highest rates and England the lowest (Figure 4). The one exception was for female mortality, where the rate for Northern Ireland was slightly higher than that for Scotland. Breast cancer incidence and mortality rates were similar in England, Wales and Scotland, but lower in Northern Ireland. Incidence rates for prostate cancer varied, with Wales having the highest and Scotland the lowest, but mortality rates were very similar in each country (Tables 1 and 2).

The variation between countries in incidence rates for oesophageal cancer was different for males and females, with Scotland having the highest rates for both sexes while England had the lowest male rate and Northern Ireland the lowest female rate (Figure 5). Differences in coding practices could account for some of the variation.[4] Male mortality rates followed a similar pattern to

**Table 2** Table 2 Deaths from cancer and directly age-standardised[1] mortality rates per 100,000 population: selected sites by sex and country, 2003–05[2]

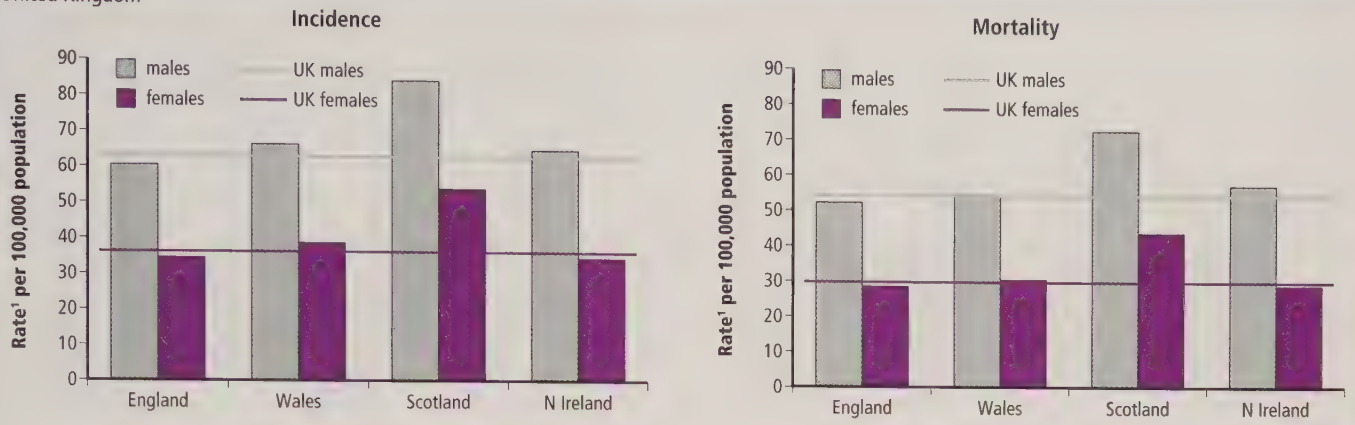
United Kingdom

| ICD–10 | Site description | Sex | United Kingdom | | England | | Wales | | Scotland | | N Ireland | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Number | Rate | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| **C00–C97** | **All malignancies** | **M** | **80,031** | **221.5** | **66,053** | **217.3** | **4,405** | **227.2** | **7,655** | **257.3** | **1,917** | **221.3** |
| | | **F** | **73,928** | **156.0** | **60,589** | **154.2** | **4,044** | **161.4** | **7,444** | **181.9** | **1,851** | **158.1** |
| C00–C14 | Lip, mouth & pharynx | M | 1,289 | 3.9 | 1,016 | 3.7 | 70 | 4.0 | 173 | 6.2 | 30 | 3.5 |
| | | F | 680 | 1.5 | 547 | 1.5 | 39 | 1.6 | 76 | 2.0 | 18 | 1.6 |
| C15 | Oesophagus | M | 4,754 | 13.5 | 3,898 | 13.2 | 255 | 13.4 | 502 | 17.0 | 99 | 11.7 |
| | | F | 2,588 | 4.9 | 2,098 | 4.8 | 149 | 5.2 | 289 | 6.4 | 52 | 4.1 |
| C16 | Stomach | M | 3,619 | 9.8 | 2,938 | 9.5 | 225 | 11.6 | 356 | 11.9 | 100 | 11.4 |
| | | F | 2,237 | 4.2 | 1,790 | 4.0 | 140 | 4.7 | 239 | 5.3 | 69 | 5.3 |
| C18–C20 | Colorectal | M | 8,516 | 23.5 | 6,921 | 22.7 | 517 | 26.6 | 843 | 28.1 | 234 | 27.1 |
| | | F | 7,348 | 14.1 | 6,018 | 13.9 | 407 | 14.4 | 718 | 16.3 | 205 | 16.8 |
| C25 | Pancreas | M | 3,430 | 9.7 | 2,870 | 9.6 | 190 | 9.9 | 294 | 9.9 | 77 | 9.0 |
| | | F | 3,687 | 7.4 | 3,070 | 7.5 | 202 | 7.5 | 326 | 7.9 | 89 | 7.2 |
| C32 | Larynx | M | 632 | 1.8 | 504 | 1.7 | 37 | 2.1 | 78 | 2.7 | 14 | 1.6 |
| | | F | 171 | 0.4 | 133 | 0.3 | 7 | 0.3 | 25 | 0.7 | 6 | [3] |
| C34 | Lung | M | 19,598 | 54.2 | 15,861 | 52.2 | 1,064 | 54.5 | 2,175 | 72.5 | 498 | 57.1 |
| | | F | 13,729 | 29.7 | 10,915 | 28.5 | 727 | 30.5 | 1,762 | 43.7 | 325 | 28.8 |
| C43 | Melanoma of skin | M | 968 | 2.9 | 804 | 2.8 | 54 | 3.1 | 86 | 3.0 | 25 | 3.0 |
| | | F | 819 | 1.9 | 688 | 2.0 | 51 | 2.5 | 66 | 1.8 | 15 | 1.3 |
| C50 | Breast | F | 12,426 | 28.4 | 10,424 | 28.8 | 676 | 29.0 | 1,121 | 29.7 | 205 | 19.0 |
| C53 | Cervix | F | 1,082 | 2.7 | 875 | 2.6 | 62 | 3.1 | 116 | 3.4 | 29 | 2.8 |
| C54 | Uterus | F | 1,115 | 2.3 | 927 | 2.3 | 65 | 2.6 | 105 | 2.4 | 18 | 1.5 |
| C56 | Ovary | F | 4,413 | 10.3 | 3,642 | 10.3 | 238 | 10.6 | 405 | 10.5 | 128 | 11.8 |
| C61 | Prostate | M | 10,132 | 26.4 | 8,545 | 26.4 | 576 | 27.5 | 784 | 25.8 | 227 | 25.9 |
| C62 | Testis | M | 88 | 0.4 | 65 | 0.3 | 5 | [3] | 10 | 0.4 | 8 | 6.3 |
| C64 | Kidney | M | 2,026 | 5.8 | 1,678 | 5.7 | 110 | 6.0 | 181 | 6.2 | 57 | 6.7 |
| | | F | 1,293 | 2.8 | 1,041 | 2.7 | 73 | 2.9 | 147 | 3.6 | 33 | 2.9 |
| C67 | Bladder | M | 3,158 | 8.4 | 2,659 | 8.4 | 165 | 8.1 | 278 | 9.2 | 56 | 6.4 |
| | | F | 1,666 | 2.9 | 1,375 | 2.9 | 88 | 2.8 | 175 | 3.6 | 28 | 2.0 |
| C71 | Brain | M | 1,990 | 6.1 | 1,655 | 6.1 | 93 | 5.6 | 195 | 7.1 | 46 | 5.5 |
| | | F | 1,389 | 3.7 | 1,136 | 3.7 | 76 | 3.9 | 144 | 4.2 | 34 | 3.5 |
| C81–C96 | Lymphomas and Leukaemias | M | 6,357 | 17.8 | 5,380 | 17.9 | 326 | 17.0 | 501 | 17.1 | 150 | 17.2 |
| | | F | 5,445 | 11.1 | 4,540 | 11.2 | 271 | 10.5 | 500 | 12.0 | 135 | 10.8 |
| C81–C85 | Lymphomas | M | 2,544 | 7.2 | 2,164 | 7.3 | 112 | 5.9 | 205 | 7.1 | 63 | 7.3 |
| | | F | 2,264 | 4.7 | 1,880 | 4.7 | 108 | 4.2 | 212 | 5.2 | 63 | 5.1 |
| C81 | Hodgkin's disease | M | 173 | 0.5 | 147 | 0.5 | 8 | 0.4 | 13 | 0.5 | 4 | [3] |
| | | F | 125 | 0.3 | 108 | 0.3 | 5 | [3] | 8 | 0.2 | 4 | [3] |
| C82–C85 | Non-Hodgkin's lymphoma | M | 2,372 | 6.7 | 2,017 | 6.8 | 104 | 5.5 | 192 | 6.6 | 59 | 6.8 |
| | | F | 2,139 | 4.4 | 1,772 | 4.4 | 103 | 3.9 | 204 | 4.9 | 59 | 4.7 |
| C90 | Multiple myeloma | M | 1,318 | 3.6 | 1,101 | 3.6 | 74 | 3.8 | 106 | 3.5 | 37 | 4.2 |
| | | F | 1,229 | 2.4 | 1,024 | 2.4 | 63 | 2.4 | 112 | 2.4 | 30 | 2.3 |
| C91–C95 | Leukaemia | M | 2,409 | 6.7 | 2,040 | 6.8 | 135 | 7.1 | 185 | 6.3 | 49 | 5.6 |
| | | F | 1,913 | 3.9 | 1,602 | 3.9 | 97 | 3.9 | 172 | 4.3 | 42 | 3.3 |

1 Using the European standard population.
2 All numbers and rates in this table are calculated as three-year averages.
3 Directly age-standardised rates were considered unreliable and were not calculated when there were fewer than 20 deaths over three years in an area.

**Figure 3** Lung cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]

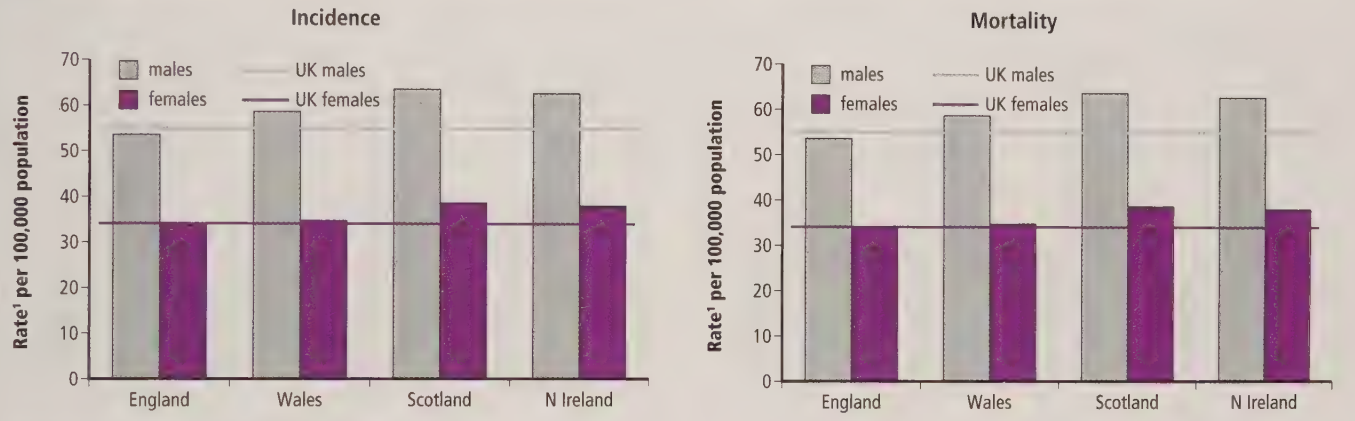
United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

**Figure 4** Colorectal cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]

United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

the female rates, with Scotland having the highest and Northern Ireland the lowest. For stomach cancer, Wales had the highest male incidence rate and England the lowest (Figure 6). For females, incidence was similar in Scotland, Wales and Northern Ireland but lower in England. Stomach cancer mortality rates for males were similar in Scotland, Wales and Northern Ireland, but lower in England. Female mortality rates were similar in Scotland and Northern Ireland, but a little lower in Wales and England.

Overall incidence and mortality rates for England were similar to those for the UK, since the cases and deaths for England accounted for more than 80 per cent of the UK total.

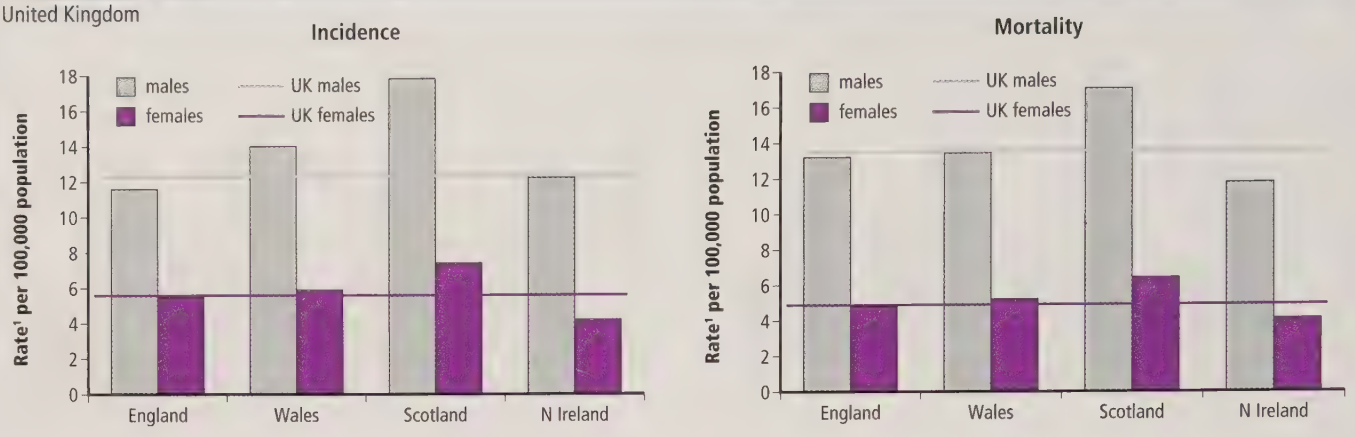
Wales had the highest incidence rate for male cancer in the UK. The incidence of prostate cancer was 15 per cent higher for Wales than for the UK as a whole, though mortality from prostate cancer was only 4 per cent higher. In both males and females, the incidence of bladder cancer was nearly 70 per cent higher than the rate for the UK, but mortality was not higher than for the UK as a whole. This is because certain types of bladder cancer, which are classified as benign elsewhere, are registered as malignant in Wales.[5]

In Scotland, the incidence of lung cancer was 34 per cent higher for males and 50 per cent higher for females than in the UK as a whole. The incidence of other smoking-related cancers – oesophagus, lip, mouth and pharynx, and larynx – was also higher in Scotland than in the other countries of the UK. The incidence of prostate cancer was 13 per cent lower in Scotland than in the UK as a whole. The overall cancer mortality rates for both sexes were around 16 per cent higher than those for the UK as a whole, and the overall cancer incidence rates were around 10 per cent higher. The mortality rate for lung cancer in Scotland was 34 per cent higher for males and 47 per cent higher for females than in the UK as a whole. In males it was nearly three times the mortality rate for prostate cancer and in females it was 47 per cent higher than the mortality rate for breast cancer. Female mortality from cancer of the kidney was 29 per cent higher in Scotland than in the UK as a whole.

In Northern Ireland, overall incidence and mortality rates were very close to those for the UK as a whole. The rates for colorectal cancer were higher than those for the UK; incidence was 14 per cent higher in males and 12 per cent higher in females while mortality was 15 per cent higher in males and 19 per cent higher in females. The mortality rate for bladder cancer was 24 per cent lower in males compared with the UK as a whole, and 31 per cent lower in females. The incidence and mortality rates for breast cancer were the lowest in the UK, with the mortality rate being a third lower than that for the UK as a whole.

**Figure 5** Oesophageal cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]

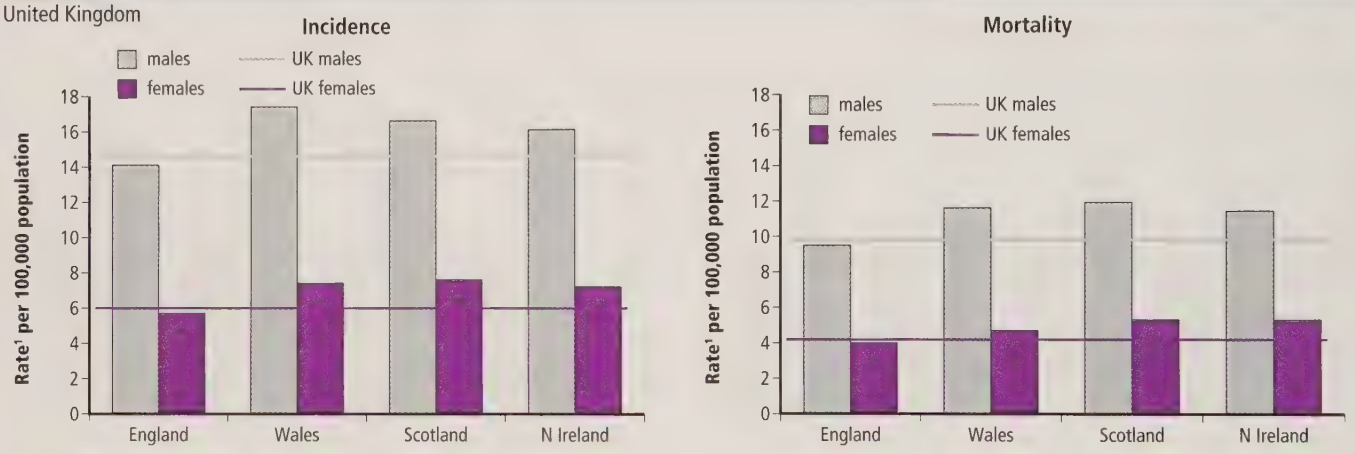
United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

**Figure 6** Stomach cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]

United Kingdom




1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

## Acknowledgements

These analyses have been produced with the assistance of the Welsh Cancer Intelligence and Surveillance Unit, the Scottish Cancer Registry and the Northern Ireland Cancer Registry. The National Cancer Intelligence Centre (NCIC) at the Office for National Statistics gratefully acknowledges their assistance. The NCIC also acknowledges the work of the regional cancer registries in England, and their close cooperation with the national registry.

### Cancer Registries in the United Kingdom

Welsh Cancer Intelligence and Surveillance Unit
Scottish Cancer Registry
Northern Ireland Cancer Registry

### Regional Registries in England:

Northern and Yorkshire Cancer Registry
Trent Cancer Registry
Eastern Cancer Registration and Information Centre
Thames Cancer Registry
Oxford Cancer Intelligence Unit
South West Cancer Intelligence Service
West Midlands Cancer Intelligence Unit
North West Cancer Intelligence Service

## Technical notes

1. Incidence and mortality rates have been directly age-standardised, using the European standard population, to control for differences in the age structure of the population between countries, and over time, to allow unbiased comparisons between rates.

2. The Office for National Statistics has been advised, both by expert epidemiologists and by members of the Advisory Committee on Cancer Registration, that non-melanoma skin cancer (ICD–10 C44) is greatly under-registered. Registration varies widely depending on a registry's degree of access to out-patient records and general practitioners. Incidence figures given in this report for 'all cancers' therefore exclude non-melanoma skin cancer.

3. The incidence figures in this report are those published at the time of the annual releases. The cancer registration systems are live databases. Therefore, the figures presented here may not reflect those on the live databases.

4. Numbers and rates presented in this report have been calculated as three-year averages to reduce the effects of random variation in small numbers over time.

5. These data are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14209

## References


1. Office for National Statistics (2007) 'Annual Update: Cancer incidence and mortality in the United Kingdom and constituent countries, 2002–04', *Health Statistics Quarterly* **35**, 78–83. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
2. Office for National Statistics, cancer incidence and mortality statistics for the UK for 2002–04 were published on 26 July 2007 and are available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14209
3. Westlake S and Cooper N (2008) 'Cancer incidence and mortality: trends in the United Kingdom and constituent countries, 1993 to 2004', *Health Statistics Quarterly* **38**, 33–43. Available on the Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
4. Newnham A and Quinn M J (2003) 'Trends in the subsite and morphology of oesophageal and gastric cancer in England and Wales 1971–1998', Alimentary Pharmacology & Therapeutics **17**, 665–76.
5. Cooper N and Cartwright R (2005) 'Bladder' in *Cancer Atlas of the United Kingdom and Ireland 1991–2000*, Studies on Medical and Population Subjects no. **68**, Palgrave Macmillan: Basingstoke.

# Other population and health articles, publications and data

## *Population Trends 134*

**Publication December 2008**

**Planned articles:**

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- Population 'turnover' and 'churn' – enhancing understanding of internal migration in Britain through measures of stability
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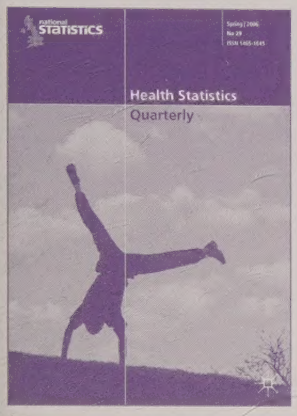


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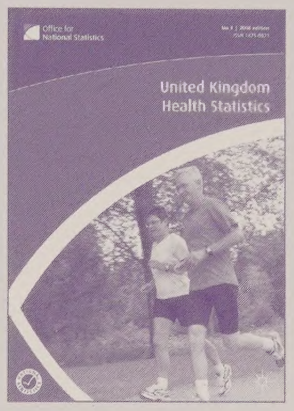


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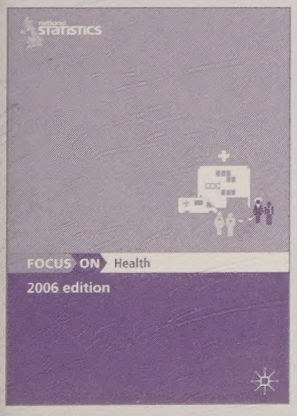


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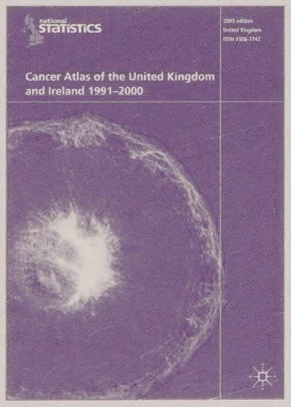


This atlas presents data on cancer incidence and mortality from the whole of the UK and Ireland in a uniquely useful and detailed way.

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